Product Catalog

Water Source Heat Pump
Axiom™ Horizontal/Vertical—GEH/GEV
½ – 5 Tons — 60 Hz

November 2013 **WSHP-PRC017H-EN**

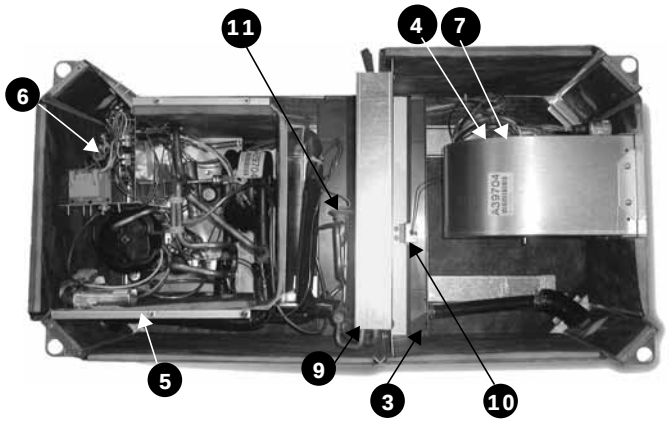
Introduction

Imagine a full range of comfort utilizing efficiency, sound attenuation, integrated controls, and superior maintenance accessibility. The GEH and GEV models are Trane water source comfort solutions.

Model GEH (pictured below) is a ceiling hung product that provides a sleek, innovative shape, along with convertibility of the supply-air and the return-air arrangement; serviceability to maintenance components; indoor air quality standards; sound attenuation; and best of all, higher efficiencies with certified ARI-ISO13256-1 performance and ASHRAE 90.1 standards.

Trane's new design incorporates system advantages such as:

1. Maximum return-air and supply-air flexibility
2. Superior maintenance accessibility
3. Dual-sloped, noncorrosive drain pan
4. Multi-speed motor
5. Insulated enclosure for quiet unit design
6. Integrated controls
7. Orifice ring motor mounting device as standard for ease of motor service
8. High and low pressure safeties as standard
9. Internal air-to-refrigerant coil (horizontal design)
10. 24V condensate overflow switch
11. TXV
12. Freezestat



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Revision Summary

WSHP-PRC017H-EN (09 November 2013)

- Added BACnet®

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Features and Benefits

Air-Side Filter

The air-side filter incorporates a 1-inch thick (nominal) 2-inch thick (nominal), MERV 8 or MERV 13 disposable fiberglass option. These filters include an average synthetic dust weight arrestance of approximately 75%. This dust holding capability includes a colorless, odorless adhesive to retain dirt particles within the filter media after fiber contact.

Air-to-Refrigerant Coil

The air-to-refrigerant heat exchanger is constructed of staggered copper tubes with die-formed corrugated lanced aluminum fins. The fins are then mechanically bonded to the tubes through expansion.

The coil is placed internal of the unit design for the GEH model to provide an optional dual filtration application. With dual filtration to the GEH unit, maintenance to the filter is significantly less than with a single filtration system. This design also offers maximum flexibility of the supply and return air configurations.

The maximum working pressure for both the GEH and GEV coils is 650 psig. It is designed for maximum capacity with an additional benefit of physical unit size reduction.

Coil specifications for both GEH and GEV models may be found on in the "General Data," p. 23 of this catalog.

Blower Housing

The blower housing is constructed of non-corrosive galvanized steel. A factory-mounted orifice ring is provided for ease of motor serviceability on the ½-5 ton direct drive units.

All air-side panels are interchangeable with one another for ease of field convertibility of the supply-air on the GEH model.

Cabinet Insulation

The cabinet insulation design meets UL 181 requirements. The air stream surface of the insulation is fabricated of a non-biodegradable source.

Compressor and Co-axial Coil Isolation

Vibration isolation of the compressor and co-axial water coil is accomplished by increasing the rigidity and stiffness at the base. The platform provides double isolation to the compressor and single isolation to the co-axial water coil for additional attenuation during compressor start and stop.

Design Advantages

The horizontal and vertical configurations range in capacities from ½-5 tons. The innovative designs offers superior field flexibility at the jobsite along with service accessibility.

Blower Motor

The supply-air (blower) motor is a multi-speed motor with internal thermal overload protection. The motor bearings are permanently lubricated and sealed. The motor is selected for the fan housing using rubber isolators to minimize vibration transmission. See fan performance tables for static ranges. All motors are factory wired to the option selected. A high, medium, and low speed tap is provided for field customization on most voltages. The speed tap modification can be made in the control box of the unit.

Note: *The 380, 415, 460 and 575 volt designs are provided in a dual or three-speed version only. See "Unit Fan Performance," p. 98 for factory ratings.*

Serviceability to the motor is made through either of the two air-side access doors for the horizontal configuration, and through one air-side access door on vertical configuration. The motor and blower wheel are removable by an orifice ring mounted to the fan housing.

Co-axial Water-to-Refrigerant Coil

The unit's internal heat exchanging water coil is engineered for maximum heat transfer.

The copper or cupro-nickel seamless tubing is a tube within a tube design. The inner-water tube contains a deep fluted curve to enhance heat transfer and minimize fouling and scaling. It is available in either copper or cupro-nickel (selectable option) coil. The outer refrigerant gas tube is made from steel material. The coil is leak tested to assure there is no cross leakage between the water tube and the refrigerant gas (steel tube) coil. Co-axial heat exchangers are more tolerant to freeze rupture.

Compressor

The unit's design includes a wide variety of compressor motors to accommodate dedicated voltages and tonnage sizes. The ½ - 1½ ton products have a rotary compressor design, where as unit sizes ranging from 2-5 ton include a scroll compressor style. These different styles allow Trane to provide the voltage variations along with noise reduction required in today's applications.

Drain Pan

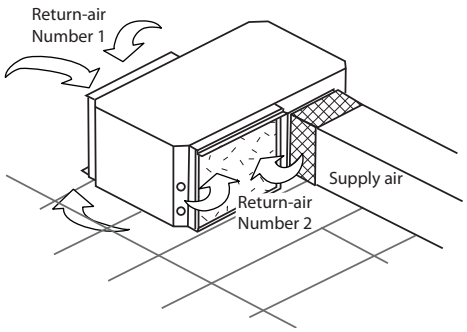
The unit drain pan is composed of plastic, corrosive resistive material. The pan is positively sloped to comply with ASHRAE 62 for (IAQ) indoor air quality conformity.

Access to the drain pan is provided through two access panels for cleaning purposes.

Dual Filtration

Flexibility of the GEH allows for dual filtration in a free return application. With the field installed dual filtration accessory, filter maintenance of the unit is significantly less.

The accessory package includes both the bottom and top filter rack, and one, 1-inch or 2-inch filter. Table 122, p. 135 provides dual filtration accessory numbers appropriate to unit size.

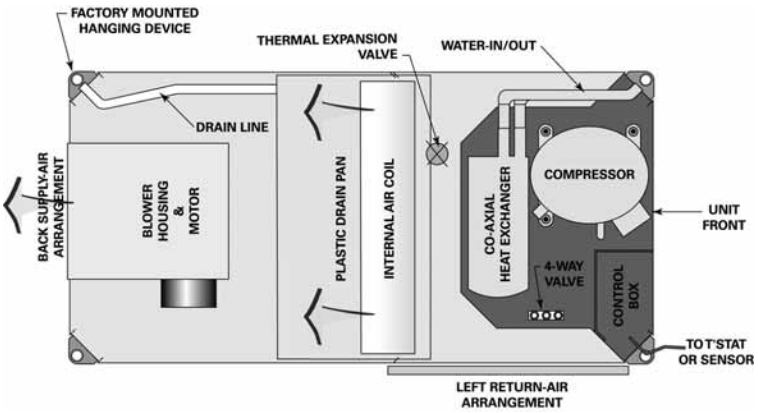


Model GEH Cabinet

The GEH cabinet design includes a modular platform that utilizes similar parts and assemblies throughout the product line. It is constructed of heavy gauge (non-painted) galvanized metal for maximum durability and corrosive resistive exterior.

The cabinet front allows service access for the controls and refrigeration circuitry. Water-in/out connection and high/low voltage hook-up is accomplished at the 45° corners on the front-side of the equipment.

The unit offers six product variations of return-air and supply-air combinations which may be order-specific or job-site modified.

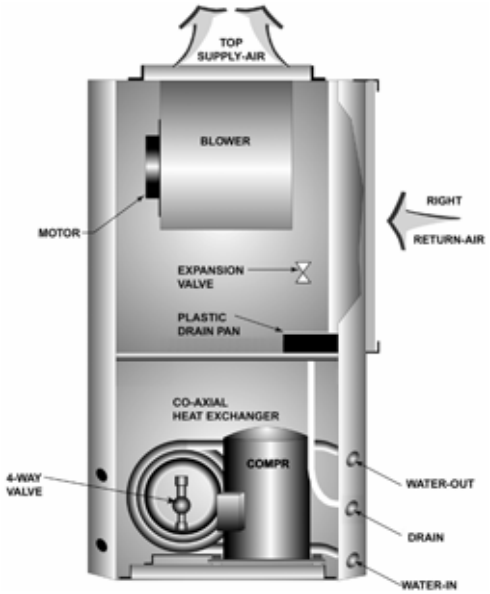


Model GEV Cabinet

The cabinet design contains a modular platform utilizing similar parts and assemblies to the horizontal to provide a repetitious look and feel for installation and maintenance personnel. It is constructed of heavy gauge (non-painted) galvanized metal for maximum durability and corrosive resistive exterior.

The cabinet front allows service access for the controls and refrigeration circuitry. Water-in/out connection, drain connection, and high/low voltage hook-up is accomplished at the 45° chamfered corners on the front-side of the equipment. The vertical design offers four product variations of return-air and supply-air combinations.

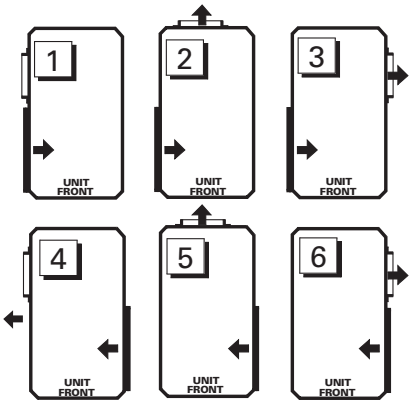
The GEV model's supply air arrangement may be field converted through a service kit to aid in stocking of a single unit variation.



Supply/Return Air Combinations

The GEH model configuration may be built to order or modified on-site to meet unique installation requirements. The six combinations are shown in Figure 1:

Figure 1. Airflow combinations of GEH ½-5 tons

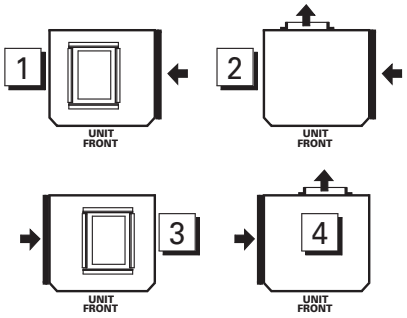


1. Left return-air with left supply-air combination
2. Left return-air with rear supply-air combination
3. Left return-air with right supply-air combination
4. Right return-air with left supply-air combination
5. Right return-air with rear supply-air combination
6. Right return-air with right supply-air combination

GEV Flexibility

The GEV model is also capable of on-site modifications. With the vertical configuration, the supply-air is easily converted from a top supply-air to a back supply-air with a service retrofit kit. The return-air option is order specific. The four combinations are shown in Figure 2.

Airflow Combinations of GEV ½-5 tons



1. Right return-air with top supply-air combination
2. Right return-air with back supply-air combination
3. Left return-air with top supply -air combination
4. Left return-air with back supply-air combination

Hanging device

The hanging bracket resides in the chamfered corner of the horizontal ½-5 ton equipment. This partially-concealed bracket design eliminates added height, width, or length to the product. The brackets are factory mounted to shorten job installation requirements.

The structural integrity of the design helps assure no bracket deflection or unit bowing from the unit's weight.

Field return-air hook-up and filter maintenance are more simplistic. Isolation for the hanging bracket is provided with a neoprene rubber grommet design.

This isolation device helps prevent sound vibration from reaching the structural support members of the building during compressor start and stop.

Refrigeration Piping

The unit's copper tubing is created from a 99% pure copper formation that conforms to the American Society of Testing (ASTM) B743 for seamless, light-annealed processing.

The unit's copper refrigeration system is designed to be free from contaminants and conditions such as drilling fragments, dirt, or oil. This excludes the possibility of these contaminants from damaging the compressor motor.

Schrader Connections

The connections for the low and high side of the refrigeration system are located directly beside the control box at the front, service access panel.

Expansion Valve

All Trane water-source systems include an expansion valve flow metering device. The thermal expansion valve (TXV) allows the unit to operate with an entering fluid temperature from 25°F to 110°F, and entering air temperatures from 55°F to 95°F. The valve is designed to meter refrigerant flow through the circuitry to achieve desired heating or cooling.

The expansion valve device allows the exact amount of refrigerant required to meet the coil load demands. This precise metering by the TXV increases the efficiency of the unit and eliminates the need for a water regulating valve.

Reversing Valve

A system reversing valve (4-way valve) is included with all heating/cooling units. This valve is piped to be energized in the cooling mode to allow the system to provide heat if valve failure were to occur. Once the valve is energized for cooling, it will remain energized until the control system is turned to the OFF position, or a heating cycle is initiated.

Sound Attenuation Package

Testing of conventional units has identified that the sound radiated by the casing of the unit is an important component of the sound that reaches occupants, especially when the unit is located directly over the occupied space.

This sound reduction package reduces radiated noise from the cabinet. Trane double-isolates the compressor and single-isolates the co-axial coil in the unit. This design absorbs the vibration that contributes to radiated sound. For sound critical spaces, an enhanced sound package as described in Table 1, p. 9, provides additional attenuation.

Table 1. Sound package (GEH units ONLY)

Enhanced Sound Attenuation Package (Standard)	Deluxe Sound Attenuation Package (Option)
18-gauge compressor enclosure	16-gauge compressor enclosure
18-gauge single wall front panel	16-gauge single wall front panel
lined compressor enclosure with ½-inch cabinet insulation	lined compressor enclosure with ½-inch cabinet insulation
12-gauge compressor/water-to-refrigerant heat exchanger pan with second stage of vibration isolation	12-gauge compressor/water-to-refrigerant heat exchanger pan with second stage of vibration isolation
compressor vibration isolation	compressor vibration isolation
water-to-refrigerant heat exchanger vibration isolation	water-to-refrigerant heat exchanger vibration isolation
lengthwise unit base stiffeners	lengthwise unit base stiffeners
	3/32-inch foam gasket sealant placed around the perimeter

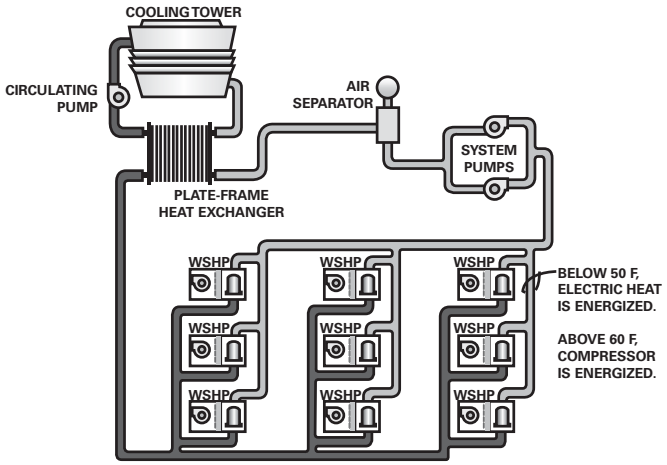
Boilerless Control, Electric Heat (option)

In cooling dominant regions where heat may be used 15 to 30 days out of the winter season, eliminating the boiler may be an economical advantage to the building owner. Eliminating a boiler from the system reduces costs associated with the mechanical system installation, as well as the maintenance and service of the boiler.

How can heat be provided for the few days of the year when heat is necessary? Through the water-source heat pump of course. The advantage of the water-source heat pump is it's ability to provide heat recovery within the closed water-loop. While some WSHPs may be extracting heat from the closed water loop, other WSHPs may be adding heat to the closed water loop. This creates a perfect system balance for heat sharing or movement from one space to another.

But when water temperatures fall in a boilerless system, and no further heat recovery may be made via the closed loop, heat may be added to the space through a boilerless control electric heat option. See Figure 2 for the boilerless control, electric heat system diagram.

Figure 2. Boilerless control, electric heat system



With the boilerless electric heat option, the heat pump encompasses an internal nichrome open wire heating element (factory mounted and wired). It is comprised of a single stage of electric heat designed to invoice an electric heater in place of the compressor in the event entering water temperature falls below 55°F or a field adjusted temperature setting between 25°F to 60°F.

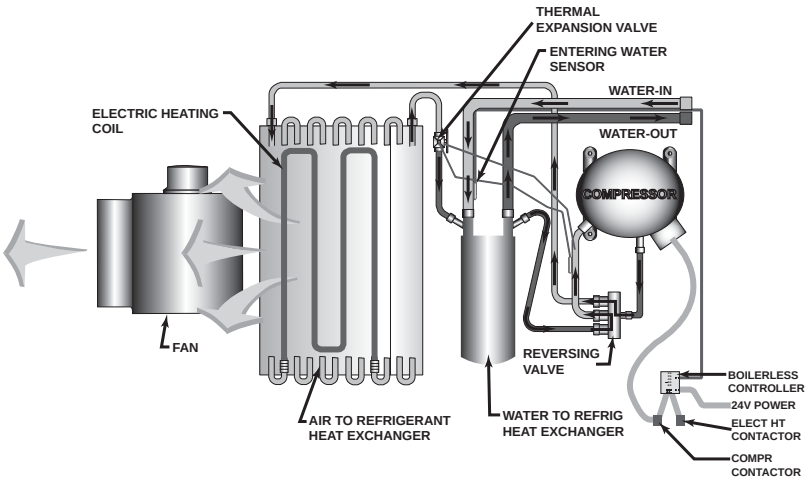
What is NOT available with the boilerless electric heat option? Hot gas reheat, Basic 24V controls, 115 and 575V ratings and supplemental or emergency heat applications.

Boilerless Control/Electric Heat Heating/Cooling Mode

In heating mode, when the water temperature falls below 55°F (factory setting), the electric heater is energized, locking out the compressor. The systems electric heat source will continue to be utilized for primary heating until the loop temperature rises above 60°F. Once the entering water temperature rises above 60°F, the boilerless controller returns the unit to normal compressor heating operation and locks out the electric heater. This maximizes efficiency from the unit during the few days requiring heat from the mechanical system.

See Figure 3 for the factory mounted and wired boilerless control electric heat water-source heat pump. This is available as a single point power connection.

Figure 3. Boilerless control, electric heat water-source heat pump



A boilerless controls option for field installed electric heat is also available. In this application, the heater shall be placed external to the equipment. All power connections for the electric heater will be completely separate from the unit. The unit contains boilerless controls to interface with the field provided electric heat.

Note: *For geothermal applications, the boilerless controller has an adjustable setting of 25°, 35°, 45°, 55° and 60°.*

Water Connections

The water-in/water-out connections to the co-axial water coil are located on the right-hand chamfered corner of the unit. The fittings are mounted flush to the chamfered wall to help limit shipping damage.

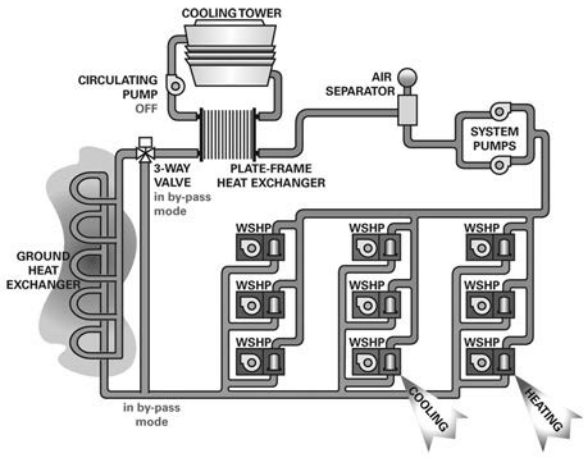
The water connection devices are constructed of copper material and include a National Female Pipe Thread (NFPT) junction. The connections are attached to the unit's chamfer corner to alleviate the need for a back-up wrench during installation.

Waterside Economizer (option)

The beauty of the waterside economizer is it's ability to take advantage of any loop condition that results in cool water temperatures. A prime example would be during fall, winter and spring when cooling towers have more capacity than required and could be controlled to lower temperatures for economizer support.

Another more common inexpensive means of free comfort cooling includes buildings systems where perimeter heating and core cooling are needed. In this system, the perimeter units extract heat from the building loop while in the heating mode, forcing the building loop temperature to drop. Where as, the core are of a building may require cooling in summer or in winter based upon lighting, people and equipment.

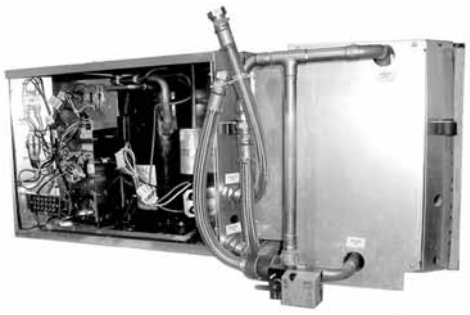
Waterside economizer system



If the water-source system design contained an economizing coil option, the moderate temperature loop water circulated through a core water-source system can provide an inexpensive means to satisfy room comfort without operating the water-source heat pump's compressor.

During economizer mode, fluid enters the unit, and passes by a water temperature sensing bulb. This temperature sensing bulb determines whether the two position, three-way valve will direct the water through the waterside economizing coil, and to the heat pump condenser, or through the condenser only. If the water temperature is 55°F or less, fluid will flow into the economizing coil, while simultaneously halting mechanical operation of the compressor. Mechanical cooling will continue on a call for second stage from the thermostat.

Model GEH with waterside economizer package



Note: *The factory built waterside economizer is available on all ½ to 5 ton GEH models.*

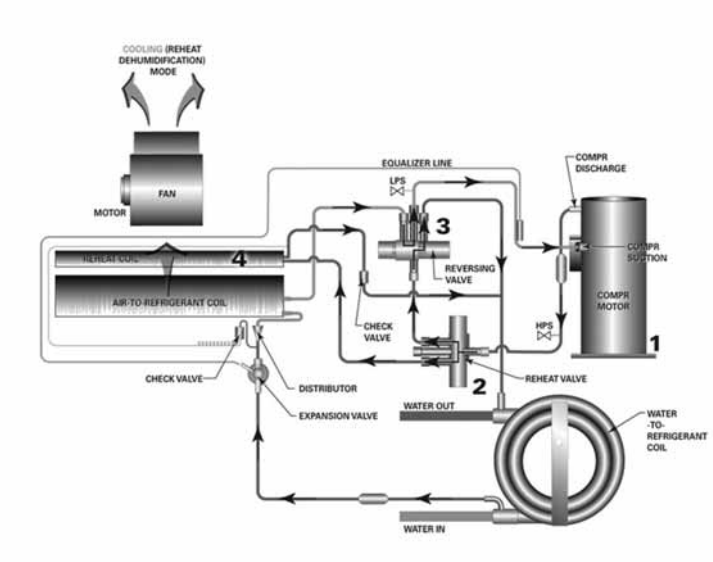
Hot Gas Reheat System

For space conditioning and climate control, Trane provides an accurate and cost effective dehumidification control through a hot gas reheat option.

With this reheat option, the return air from the space is conditioned by the air-to-refrigerant coil, then reheated by the reheat coil to control not only the space temperature, but to also reduce the relative humidity of the space. The moisture removal capability of a specific heat pump is determined by the units latent capacity rating.

When operating in the reheat mode (meaning the sensible temperature has been met in the space), the humidistat signals the reheat relay coil to energize, allowing the high pressure refrigerant gas to flow from the (1) compressor, through the (2) reheat valve, into the (3) reversing valve, or through the (4) reheat coil for dehumidification. A switching relay has been provided for the reheat application to adjust the blower motor from normal operation to low speed when hot gas reheat is energized.

Note: *Trane places an air separation space between the air-to-refrigerant coil, and the reheat coil to allow for maximum moisture removal.*



Common Reheat Applications

The hot gas reheat option is designed to support building applications requiring fresh-air ventilation units delivering unconditioned-air directly to the space. It also provides dehumidification to large latent load spaces such as auditoriums, theaters and classrooms, or anywhere humidity control is a problem.

Dos and Don'ts in Design

The factory-installed hot gas reheat option is only available with Deluxe or ZN524 controls packages.

A high-static blower motor option will be required to support the hot gas reheat option for the ½-5 ton equipment.

Water regulating valves should not be used with the hot gas reheat option. Trane places a thermal expansion valve on all water-source heat pumps, as well as ground-source heat pumps, to regulate refrigerant flow vs. water flow, making the heat pump more efficient to run.

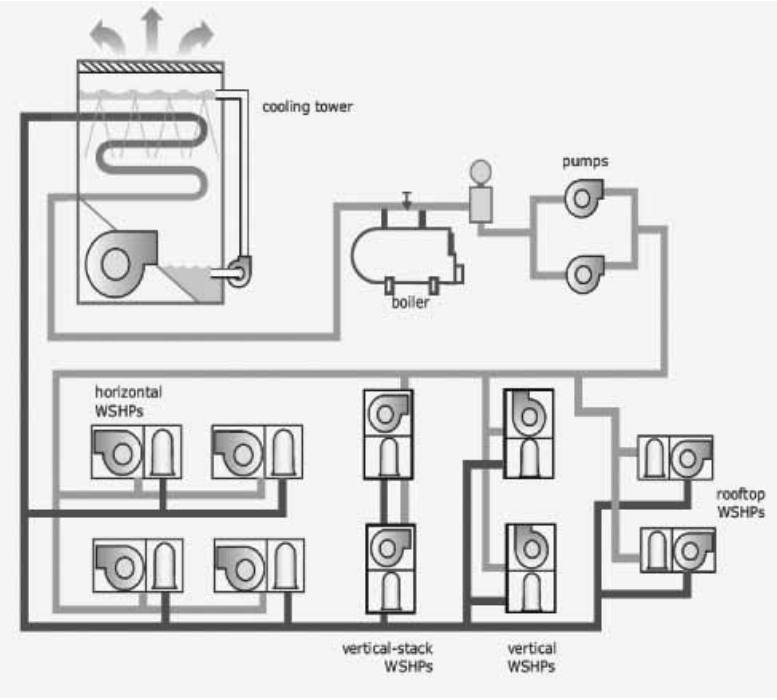
Water-source heat pumps with hot gas reheat should not be used as a make-up air unit.

Application Considerations

Water-source heat pump systems are used to provide comfort in a wide range of building types and climates. The system utilizes energy-conserving, heat-recovery capabilities to transfer heat from one area to another to meet individual zone requirements. When used with system design and control strategies, these high-performance systems reduce operating costs for the building owner and improving occupant comfort.

Heat pump units are available in many different configurations and the design simplicity can be adapted to suit almost any building plan. The vertical and horizontal water-source heat pump system is versatile for installation in a boiler/cooling tower applications, as well as ground source (geothermal) applications.

Conventional water-source heat pump system



Boiler/Cooling Tower

In this type of system, units are distributed throughout the building to provide cooling and heating to the space. Units are connected to a water distribution loop which circulated water throughout the building to transfer heat from one area to another. This common water loop yields what is essentially a heat-recovery system. Units providing heating extract heat from loop water while units providing cooling reject heat to the loop. In effect the system recovers and redistributes heat where needed.

Also connected to this water loop are a heat rejecter such as a cooling tower, a heat adder such as a boiler, circulation pumps, and related accessories. Typically, outdoor air is conditioned and delivered by a separate, dedicated ventilation system.

During warm weather when all or most of the units are cooling, the cooling tower is used to dissipate heat from the condensing process. The condensing water is cooled for recirculation back to the water-to-refrigerant heat exchanger by using a combination of heat and mass transfer by evaporation.

A boiler is also used to add heat to the water loop during winter months when most units are heating. The boiler is typically enabled when the water loop temperature falls to a minimum value.

During moderate weather, such as spring or fall, the heat pumps serving the sunny side and interior of the building often operate in cooling mode and reject heat into the water loop. The heat pumps serving the shady side of the building often operate in heating mode and absorb heat from the water loop.

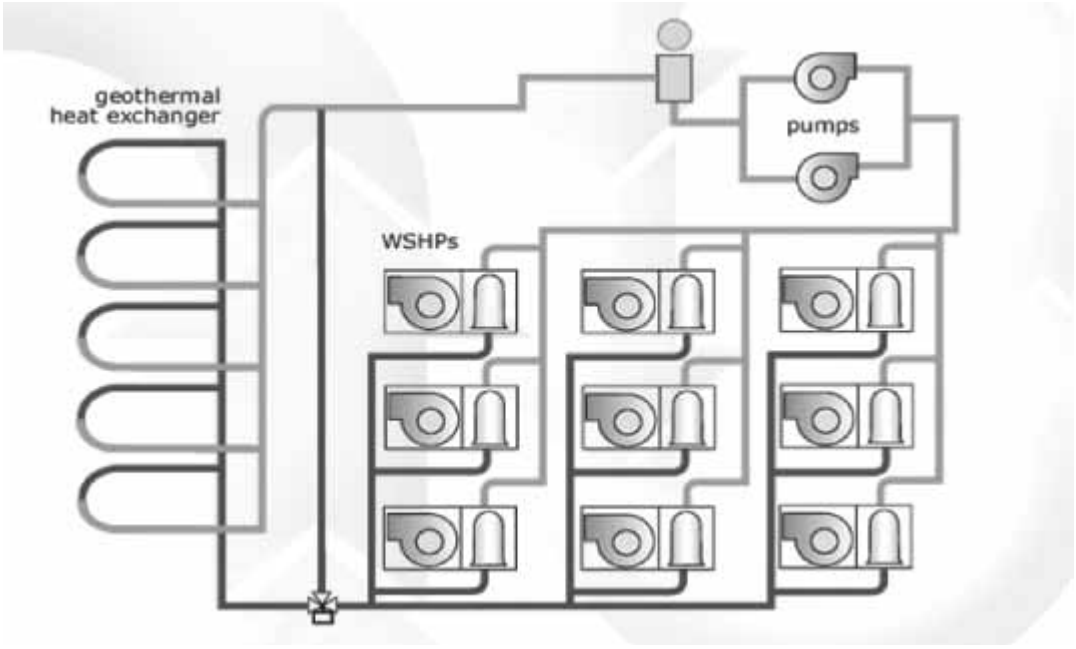
Heat rejected by the units operating in cooling mode is used to offset the heat absorbed by the units in heating mode. In this manner, a WSHP system provides a form of heat recovery and an opportunity to save energy by reducing the need to operate the boiler or cooling tower. For example, if the water temperature stays in the desired range-between 60°F (16°C) and 90°F (32°C)-neither the boiler nor the cooling tower need to operate.

In applications such as office buildings, heat generated by lights, people, and office equipment often results in the need to provide year-round cooling in the interior zones of the building. In these applications, the benefit of this heat recovery further reduces boiler energy use during the winter months.

Ground Source

The advantages of a geothermal heat pump system can literally cut business heating and cooling cost by 30 to 40 percent. In this application the cooling tower and boiler are replaced with a ground heat exchanger. The ground heat exchanger is a series of pipes buried in the earth. The earth is used as an energy storage tank. Ground-source heat pump systems offer the potential for saving energy because they can reduce (or eliminate) the energy needed to operate a cooling tower and/or boiler. Eliminating the cooling tower has architectural and maintenance advantages, and eliminating the boiler frees up floor space in the building.

Ground source heat pump system



The fluctuating temperatures of fluid from the earth are more stable than air, allowing the equipment to operate at a lower discharge pressure and use fewer kilowatts. The constant earth temperature will heat or cool the fluid running through buried high density polyethylene pipe to provide heating and cooling to a building.

A geothermal loop can be installed either horizontally or vertically. Vertical loops require less overall land area to reject (i.e., sink) the excess heat from the building. Horizontal loops require trenches in the ground spanning a larger overall land area.

Although external piping is the responsibility of the installer and/or piping manufacturer, many electric utilities and rural electric cooperatives are offering monetary incentives to install geothermal systems. Utility companies offer the incentives because of reduced peak loads that flatten out their demand curve over time, and save them money. These savings are ultimately transferred to the consumer.

Hybrid Systems

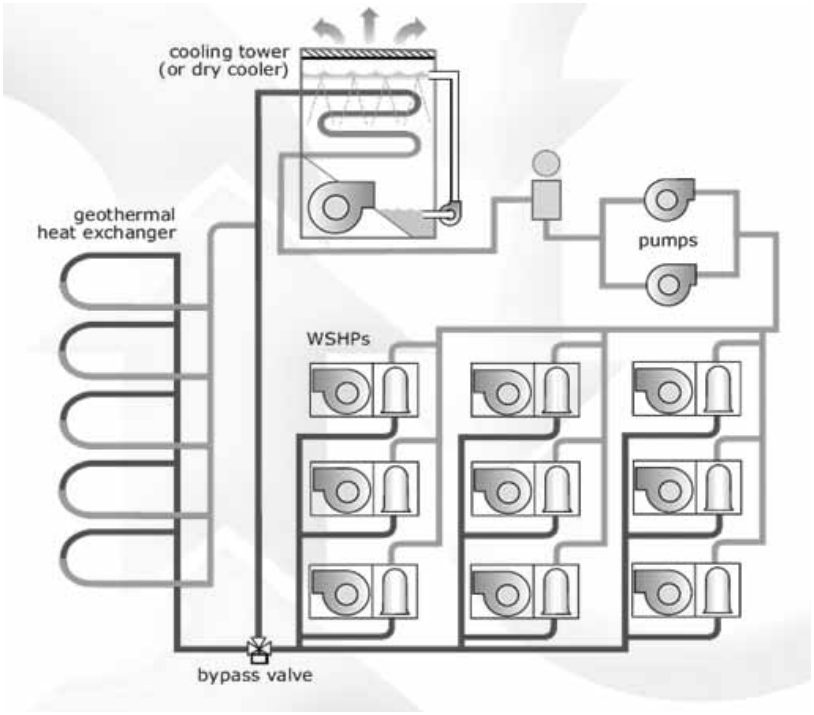
Hybrid systems involve adding a small cooling tower or dry cooler to a ground source system that is installed in a cooling -dominated climate or adding a small boiler to a system in a heating-dominated climate. In either case, the geothermal heat exchanger is sized based on the smaller of the two loads: for the total heat absorbed in a cooling-dominated climate or the total heat rejected in a heating-dominated climate. Then, a small cooling tower (or boiler) is added to reject (or add) the remaining heat.

A hybrid system may also be used in existing buildings with existing ground loops as additional rooms or buildings are added to the system. A cooling tower may be the solution to off-load the peak demand of the new building addition as an example. Other additions may include a requirement for fresh-air ventilation. A fresh-air, air handler, along with a water to water unit may be introduced to the closed loop system to allow tempered fresh-air into the building.

The buildings heating and cooling needs are not based off of one type of component, but perform harmonious of each other. Heat recovery from the loop itself can be shared with the other major components.

Hybrid systems can often make the system more economical, opening up the possibility to reap the potential energy savings.

Hybrid system

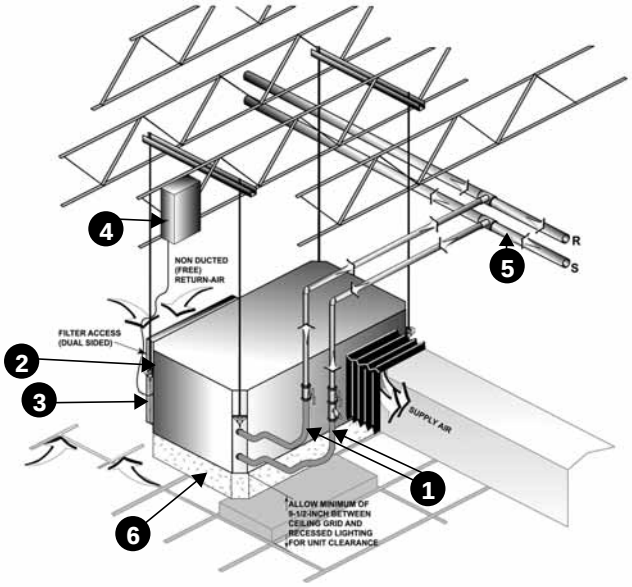


Central Pumping System

Units that employ a central pumping system contain single or dual pumps to fulfill pumping requirements for the entire building system.

The central system's supply and return lines should be sized to handle the required flow with a minimum pressure drop.

The water-source heat pump (GEH) may include add-on accessories to help aid in system balancing, acoustics and safety requirements. Some of these items may be ordered from the factory, then field installed. Many are provided by the contractor.



1. Hose kits are used to connect the water supply and return line to the water inlets and outlets. Trane offers various hose kit combinations to better facilitate system flow balancing. These flexible hoses also aid in the reduction of vibration between the unit and the rigid central piping system.
2. A three position isolation valve is often applied to systems which incorporate variable frequency pumping. This valve is capable of stopping/starting water flow to the unit, which in-turn reduces the pumping requirements for the entire system.
3. The unit's (item 2) ¾-inch high voltage and (item 3) ½-inch low voltage connections are located on the left chamfered corner of the unit. They are designed to accept conduit.
4. A field supplied line voltage disconnect should be installed for branch circuit protection. Check local codes for requirements.
5. The central system supply and return lines should be sized to handle the required flow with a minimum pressure drop.

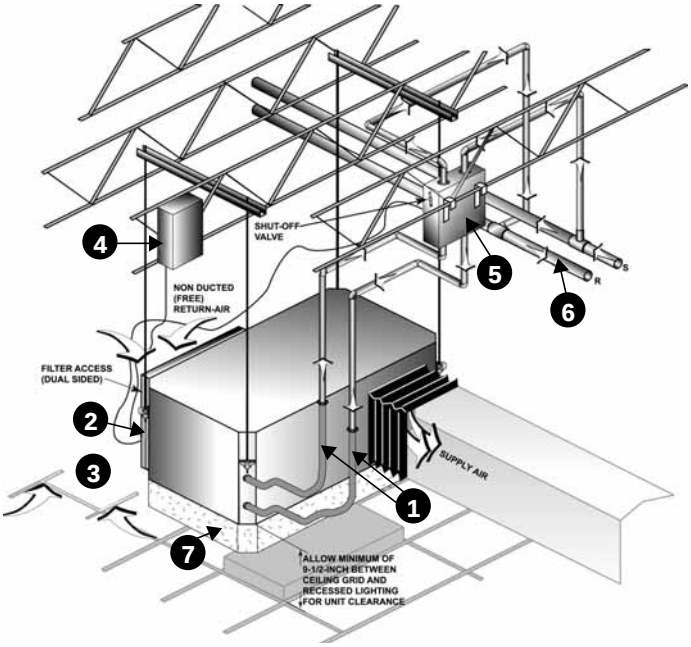
Note: *Pipe will sweat if low temperature water is below the dew point of the surrounding space. Trane recommends that these lines be insulated to prevent damage from condensation when condenser loop is designed to be below 60°F. Equipment installed in attic/crawl space temperatures below 40°F may require antifreeze in the water loop.*

6. For acoustically sensitive areas, a six-inch deep fiberglass insulation is recommended to be field installed below the horizontal unit. This field supplied insulation should be approximately twice the footprint size of the unit. It provides sound damping of the unit while in operation.

Distributed Pumping System

A distributed pumping system contains either a single or dual pump module, specifically sized for each water-source heat pump, then connected directly to the units supply and return lines.

The distributed system's supply and return lines should be sized to handle the required flow with a minimum pressure drop.



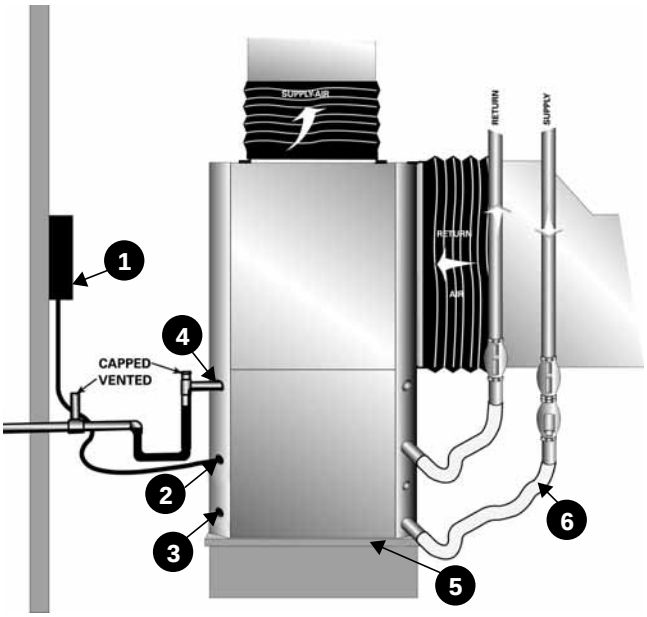
1. Hose kits are used to connect the water supply and return line to the water inlets and outlets. Trane offers various hose kit combinations to better facilitate system flow balancing. These flexible hoses also aid in the reduction of vibration between the unit and the rigid central piping system.
2. The unit's (item 2) ¾-inch high voltage and (item 3) ½-inch low voltage connections are located on the left chamfered corner of the unit. They are designed to accept conduit.
3. A field supplied line voltage disconnect should be installed for branch circuit protection. Check local codes for requirements.
4. Trane's self-contained pump module and hose kit make a complete pumping package for distributed pumping systems. The module is designed for circulating commercial loops that require a maximum flow rate of 20 gpm. Each pump module is fully assembled for connection to water and electrical points. The kit contains all of the necessary components for the installation, operation and maintenance of a closed loop application. See WSHPC-IN-5 (72-9006-03) for electrical and dimensional requirements
5. The distributed pumping system supply and return lines should be sized to handle the required flow with a minimum pressure drop.

Note: *Pipe will sweat if low temperature water is below the dew point of the surrounding space. Trane recommends that these lines be insulated to prevent damage from condensation when condenser loop is designed to be below 60°F. Equipment installed in attic/crawl space temperatures below 40°F may require antifreeze in the water loop.*

6. For acoustically sensitive areas, a six-inch deep fiberglass insulation is recommended to be field installed below the horizontal unit. This field supplied insulation should be approximately twice the footprint size of the unit. It provides sound damping of the unit while in operation.

Installation of the ½-5 Ton Vertical

Whether securing the ½-5-ton GEV to a central pumping system, or a distributed pumping system, Trane recommends a few accessory considerations to the system installation.



- The field supplied line voltage disconnect (1) should be installed for branch circuit protection.
- The units (2) ¾-inch high voltage and (3) ½-inch low voltage connections are located on the left chamfered corner of the unit. They are designed to accept conduit.
- Trane recommends that the condensate system (4) be set-up per negative pressure trapping in consideration of the unit's draw-through design. With this properly trapped system, when condensate forms during normal operation, the water level in the trap rises until there is a constant outflow. Refer to the Axiom™ Installation and Operations manual for negative pressure trapping guidelines.
- For acoustically sensitive areas, a ½-inch thick field provided vibration pad (5) should be installed below the vertical unit. This field provided piece should be equal to the overall foot-print size of the unit to provide sound damping of the unit while in operation.
- Hose kits (6) are used to connect the water supply and return lines to the water inlet and outlets. Trane includes various hose kit combinations to better facilitate system flow balancing. These flexible hoses, reduce vibration between the unit and the rigid piping system.

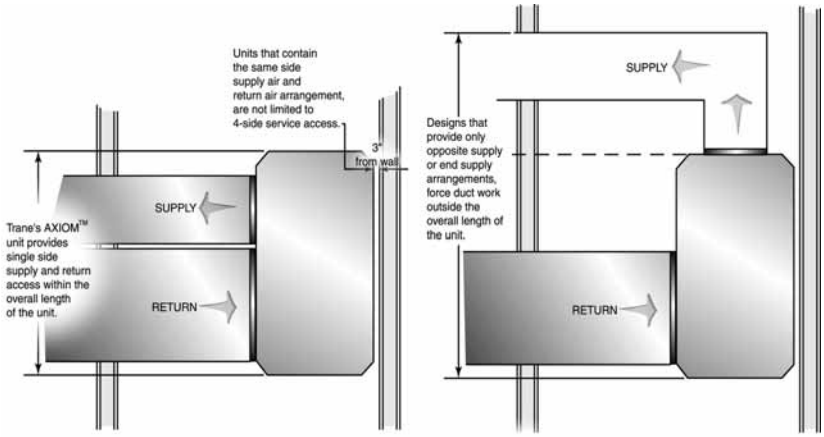
Installation Made Easy

Installing a horizontal unit inside a corridor to enhance sound attenuation provides value to duct design. Trane takes this fact one step further.

The GEH design offers same side return-air/supply-air access to the unit. This access is contained within the overall dimension of the units length. The unit can be installed closely against a corridor wall without requiring extra space for the duct.

Most horizontal unit designs provide an opposite supply air from the return air arrangement, or an end supply arrangement option. See the end-supply example. An end-supply design increases the overall unit length of the system to accommodate a 90° duct turn. This not only requires added space, but also adds cost in both materials and installation.

Additional value to the design is acquired through the same side supply/return-air design. This design eliminates a requirement for a four-sided service access. When installing the same side return/supply-air access, a brief 3-inch minimum is all that is required between the unit and the wall.

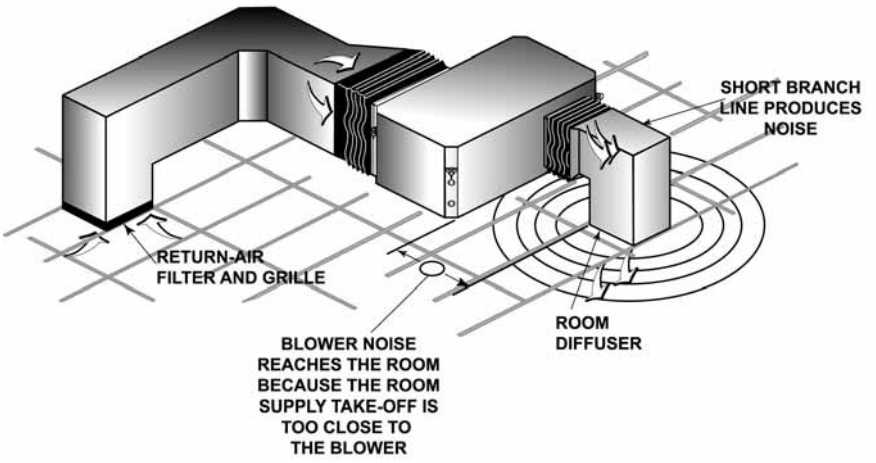


Duct Design for Noise Control

Proper acoustics are often a design requirement. Most of the problems that are associated with HVAC generated sound can be avoided by properly selecting and locating the components of the system. Acoustical modeling should be used to find the lowest cost design to meet a specific sound requirement, however, there are some general do's and don'ts that should be observed.

Figure 4. Improper supply-air ducting

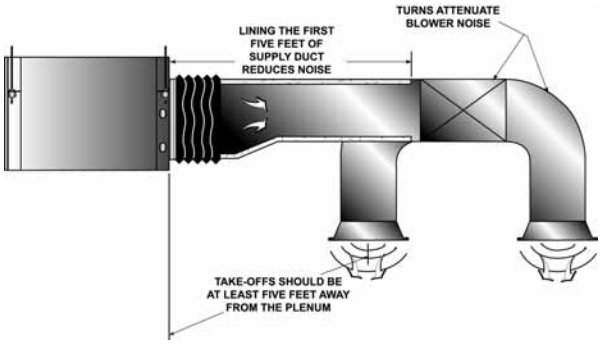
The drawing to the right shows a supply air duct that is placed too close to the blower to provide substantial noise attenuation. It also, represents the effects on sound that a short supply branch connected to the discharge may produce. Avoid these forms of connections when designing ductwork where noise attenuation is critical.



The following suggestions will reduce the amount of sound that reaches the occupied space:

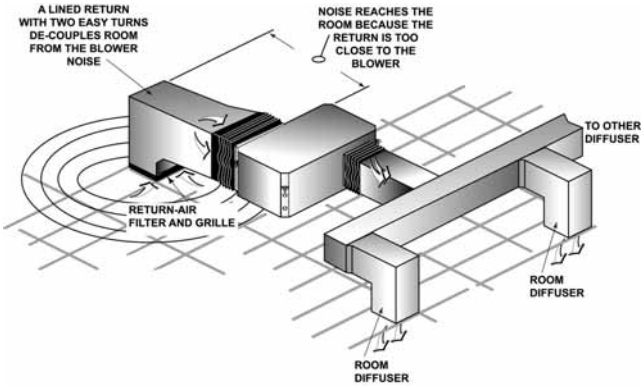
- Design the duct run with two 90° turns
- Line the first 5 feet of the supply trunk
- Line elbows and transition pieces, as well as a short distance upstream and downstream of the fittings
- Use flexible connections to isolate vibrations
- Provide multiple discharges
- Keep duct velocity low

Figure 5. Desired supply-air ducting



See Figure 5 for a positive representation of supply duct work design for noise attenuation on units over 1½ tons.

Figure 6. Improper return-air ducting



Sound control applies to the return side of the duct design as well as the supply side. Figure 6 demonstrates a poor installation. Note that the return air opening is close to the cabinet of the unit.

Figure 7. Proper return-air ducting

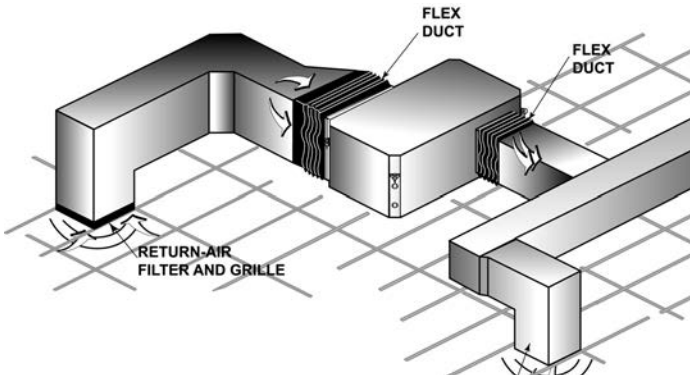


Figure 7 graphic represents proper installation of return-air duct. This includes

- Two 90° bends prior to the intake
- Lining the first 10 feet of the return air duct
- Locating the return-air intake away from the unit blower

A duct system design that takes noise control into account:

- Keeps air flow velocities low
- Uses aerodynamic fittings
- Uses a duct liner if metal duct is applied
- Avoids line-of-sight connections between a noise source and an outlet
- Avoids line-of-sight connection between a noise source and an inlet
- Properly locates balancing dampers
- Seals cracks, seams, and joints in the duct run and equipment panels
- Blocks transmission through walls, ceiling and floors
- Mounts and supports the ductwork with isolation devices that absorb vibration
- Uses flexible duct connections
- Uses flexible braided hoses on the water connections

Water Flow Control

Trane's Axiom product line features thermal expansion valves on every unit. The operating range for the TXV is between 45°F and 110°F for cooling and between 25°F and 86°F for heating. On systems that expect low water temperatures, a waterside economizer can be employed to eliminate the need to operate the compressors and take full advantage of "free cooling." Water regulating valves are not recommended.

An isolation valve is recommended for use with the Axiom WSHP unit on systems utilizing variable water flow. The isolation valve allows full water flow through the unit when the compressor is in operation. When the compressor is off, the valve closes and shuts off water flow to the unit allowing the system pumps to unload and operate more efficiently. Isolation valves are typically provided as part of the hose kit and connect to the unit terminal block. A variety of manual and automatic flow control kits including hoses are available as accessories for balancing a water source heat pump system. For a complete product listing, refer to the Hose Kit Accessories product catalog, WSHP-PRC025-EN.

Model Number Description: ½–5 Ton

G	E	H	E	0	0	6	1	1	*	0	1	B	0	B	R	D	0	1	0	0	0	0	1	0	0
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26-36

Digits 1-3 - Unit Configuration

GEH = Standard Efficiency Horizontal
GEV = Standard Efficiency Vertical

Digit 4 - Development Sequence

E = R-410A

Digits 5-7 - Nominal Capacity

006 = ½ Ton
009 = ¾ Ton
012 = 1 Ton
015 = 1¼ Ton
018 = 1½ Ton
024 = 2 Ton
030 = 2½ Ton
036 = 3 Ton
042 = 3½ Ton
048 = 4 Ton
060 = 5 Ton

Digit 8 - Voltage (Volts/Hz/Phase)

0 = 115/60/1
1 = 208/60/1
2 = 230/60/1
3 = 208/60/3
4 = 460/60/3
5 = 575/60/3
6 = 220-240/50/1
7 = 265/60/1
8 = 230/60/3
9 = 380-415/50/3

Digit 9 - Heat Exchanger

1 = Copper-Water Coil
2 = Cupro-Nickel Water Coil
7 = Insulated Copper-Water Coil
8 = Insulated Cupro-Nickel Water Coil

Digit 10 - Current Design Sequence

Digit 11 - Refrigeration Circuit

0 = Heating and Cooling Circuit
2 = Heating and Cooling Circuit with Hot Gas Reheat
3 = Heating and Cooling Circuit with Waterside Economizer

Digit 12 - Blower Configuration

1 = Standard Blower Motor
2 = High Static Blower Motor

Digit 13 - Freeze Protection

A= 20°F Freezestat (extended range geothermal)
B= 35°F Freezestat

Digit 14 - Open Digit = 0

Digit 15 - Supply-Air Arrangement

B = Back Supply-Air Arrangement
F = Front Supply-Air Arrangement
L = Left Supply-Air Arrangement
R = Right Supply-Air Arrangement
T = Top Supply-Air Arrangement

Digit 16 - Return-Air Arrangement

L = Left Return-Air Arrangement
R = Right Return-Air Arrangement

Digit 17 - Control Types

0 = Basic 24V Controls
D = Deluxe 24V Controls
B = Tracer ZN524 Controls
F = UC400
G = UC400 w/ Wireless Comm

Digit 18 - Tstat/Sensor Location

0 = Wall Mounted Location

Digit 19 - Fault Sensors

1 = Condensate Overflow Sensor
3 = Condensate Overflow and Filter Maintenance Timer
6 = Condensate Overflow and Fan Status
J = Fan Status, Filter Maintenance Timer and Condensate Overflow Sensor

Digit 20 - Temperature Sensor

0 = None
1 = Entering Water Sensor

Digit 21 - Open

Digit 22 - Electric Heat

0 = No Electric Heat
1 = Internal Boilerless Electric Heat
4 = External Boilerless Electric Heat

Digit 23 - Open

Digit 24 - Filter Type

1 = 1" Throwaway Filter
2 = 2" Throwaway Filter
4 = MERV 8
5 = MERV 13

Digit 25 - Acoustic Arrangement

0 = Enhanced Sound Attenuation
1 = Deluxe Sound Attenuation

Digits 26-36 - Does Not Apply to GEH or GEV

00000000000 = Digits 26-36 are not applicable to the GEH or GEV products

General Data

Table 2. Models GEH006-024

Model GEH	006	009	012	015	018	024
Unit Size Length x Height x Width (in)	40 x 15 x 20	40 x 15 x 20	40 x 15 x 20	40 x 15 x 20	46 x 18 x 23	46 x 18 x 23
Compressor Type	Rotary	Rotary	Rotary	Rotary	Rotary	Scroll
Net Weight (lbs.)	165	165	173	173	248	253
Ship Weight (lbs.)	195	195	203	203	268	285
Filter Size Actual (in.)	14 5/8 x 20¼	14 5/8 x 20¼	14 5/8 x 20¼	14 5/8 x 20¼	17 3/8 x 23 5/8	17 3/8 x 23 5/8
Water in/out size (FPT)	½	½	½	½	¾	¾
Condensate size (NPTI)	¾	¾	¾	¾	¾	¾
Blower Wheel Size (in.)	9 x 4	9 x 4	9 x 4	9 x 4	9 x 6	10 x 6

Table 3. Models GEH006-024 air-to-refrigerant coil

Model GEH	006	009	012	015	018	024
Working Pressure (psig)	650	650	650	650	650	650
Tubes High	14	14	14	14	17	17
Tubes Deep	3	3	3	3	3	3
No. of Circuits	1	1	2	2	2	3
Finned vol. (h,w,d)	14 x 16 x 2.6	14 x 16 x 2.6	14 x 16 x 2.6	14 x 16 x 2.6	16 x 19 x 2.6	16 x 19 x 2.6
Coil Surface Area (Sq. Ft.)	1.56	1.56	1.56	1.56	2.11	2.11
Fins per Inch	12	12	12	12	12	12
Tube Material	Copper	Copper	Copper	Copper	Copper	Copper
Tube OD (in.)	3/8	3/8	3/8	3/8	3/8	3/8
Wall Thickness	0.014	0.014	0.014	0.014	0.014	0.014
Return Bends	Copper	Copper	Copper	Copper	Copper	Copper

Table 4. Models GEH006-024 water-to-refrigerant coil

Model GEH	006	009	012	015	018	024
Working Pressure (psig)	780	780	780	780	780	780

Table 5. Models GEH030-060

Model GEH	030	036	042	048	060
Unit Size Length x Height x Width (in)	46 x 18 x 23	50 x 19 x 25	50 x 19 x 25	58 x 21 x 33	58 x 21 x 33
Compressor Type	Scroll	Scroll	Scroll	Scroll	Scroll
Net Weight (lbs.)	253	288	288	398	398
Ship Weight (lbs.)	285	318	318	428	428
Filter Size Actual (in.)	17 7/8 x 24 7/8	18 5/8 x 25 3/8	18 5/8 x 25 3/8	20 5/8 x 29¾	20 5/8 x 29¾
Water in/out size (FPT)	¾	¾	¾	1	1
Condensate size (NPTI)	¾	¾	¾	¾	¾
Blower Wheel Size (in.)	10 x 6	12 x 8	12 x 8	12 x 11	12 x 11

Table 6. Models GEH030-060 air-to-refrigerant coil

Model GEH	030	036	042	048	060
Working Pressure (psig)	650	650	650	650	650
Tubes High	17	18	18	20	20
Tubes Deep	4	3	4	4	4
No. of Circuits	4	3	4	5	5
Finned vol. (h,w,d)	16 x 19 x 3.5	18 x 21 x 2.6	18 x 21 x 3.5	20 x 29 x 3.5	20 x 29 x 3.5
Coil Surface Area (Sq. Ft.)	2.11	2.63	2.63	4.03	4.03
Fins per Inch	12	12	12	12	12
Tube Material	Copper	Copper	Copper	Copper	Copper
Tube OD (in.)	3/8	3/8	3/8	3/8	3/8
Wall Thickness	0.014	0.014	0.014	0.014	0.014
Return Bends	Copper	Copper	Copper	Copper	Copper

Table 7. Models GEH030-060 water-to-refrigerant coil

Model GEH	030	036	042	048	060
Working Pressure (psig)	780	780	780	780	660

Table 8. Models GEV006-024

Model GEV	006	009	012	015	018	024
Unit Size Length x Height x Width (in)	21½ x 31¼ x 19½	21½ x 31¼ x 19½	21½ x 31¼ x 19½	21½ x 31¼ x 19½	21½ x 39¼ x 21½	21½ x 39¼ x 21½
Compressor Type	Rotary	Rotary	Rotary	Rotary	Rotary	Scroll
Net Weight (lbs.)	165	165	173	173	248	253
Ship Weight (lbs.)	195	195	203	203	268	285
Filter Size Actual (in.)	15 7/8 x 19 7/8	15 7/8 x 19 7/8	15 7/8 x 19 7/8	15 7/8 x 19 7/8	19 7/8 x 19 7/8	19 7/8 x 19 7/8
Water in/out size (FPT)	½	½	½	½	¾	¾
Condensate size (NPTI)	¾	¾	¾	¾	¾	¾
Blower Wheel Size (in.)	9 x 4	9 x 4	9 x 4	9 x 4	9 x 6	10 x 6

Table 9. Models GEV006-024 air-to-refrigerant coil

Model GEV	006	009	012	015	018	024
Working Pressure (psig)	650	650	650	650	650	650
Tubes High	14	14	14	14	21	21
Tubes Deep	3	3	3	3	3	3
No. of Circuits	1	1	2	2	2	3
Finned vol. (h,w,d)	14 x 16 x 2.6	14 x 16 x 2.6	14 x 21 x 2.6	14 x 21 x 2.6	21 x 16 x 2.6	21 x 16 x 2.6
Coil Surface Area (Sq. Ft.)	1.56	1.56	1.56	1.56	2.33	2.33
Fins per Inch	12	12	12	12	12	12
Tube Material	Copper	Copper	Copper	Copper	Copper	Copper
Tube OD (in.)	3/8	3/8	3/8	3/8	3/8	3/8
Wall Thickness	0.014	0.014	0.014	0.014	0.014	0.014
Return Bends	Copper	Copper	Copper	Copper	Copper	Copper

Table 10. Models GEV006-024 water-to-refrigerant coil

Model GEV	006	009	012	015	018	024
Working Pressure (psig)	780	780	780	780	780	780

Table 11. Models GEV030-042

Model GEV	030	036	042
Unit Size Length x Height x Width (in)	21½ x 39¼ x 21½	26½ x 41 7/8 x 24½	26½ x 41 7/8 x 24½
Compressor Type	Scroll	Scroll	Scroll
Net Weight (lbs.)	253	288	288
Ship Weight (lbs.)	285	308	308
Filter Size Actual (in.)	19 7/8 x 19 7/8	19 7/8 x 24 7/8	19 7/8 x 24 7/8
Water in/out size (FPT)	¾	¾	¾
Condensate size (NPTI)	¾	¾	¾
Blower Wheel Size (in.)	10 x 6	12 x 8	12 x 8

Table 12. Models GEV030-042 air-to-refrigerant coil

Model GEV	030	036	042
Working Pressure (psig)	650	650	650
Tubes High	21	18	18
Tubes Deep	4	3	4
No. of Circuits	4	3	4
Finned vol. (h,w,d)	21 x 16.3 x 3.5	18 x 21 x 2.6	18 x 21 x 3.5
Coil Surface Area (Sq. Ft.)	2.33	2.63	2.63
Fins per Inch	12	12	12
Tube Material	Copper	Copper	Copper
Tube OD (in.)	3/8	3/8	3/8
Wall Thickness	0.014	0.014	0.014
Return Bends	Copper	Copper	Copper

Table 13. Models GEV030-042 water-to-refrigerant coil

Model GEV	030	036	042
Working Pressure (psig)	780	780	780

Table 14. Models GEV048-060

Model GEV	048	060
Unit Size Length x Height x Width (in)	30½ x 46 7/8 x 26½	30½ x 46 7/8 x 26½
Compressor Type	Scroll	Scroll
Net Weight (lbs.)	348	350
Ship Weight (lbs.)	396	396
Filter Size Actual (in.)	23 7/8 x 29 7/8	23 7/8 x 29 7/8
Water in/out size (FPT)	1	1
Condensate size (NPTI)	¾	¾

continued on next page

Table 14. Models GEV048-060 (continued)

Model GEV	048	060
Blower Wheel Size (in.) - Direct Drive	10 x 10 (DD) - Standard	12 x 11 (DD)
	12 x 11 (DD) - High	

Table 15. Models GEV048-060 air-to-water refrigerant coil

Model GEV	048	060
Working Pressure (psig)	650	650
Tubes High	24	24
Tubes Deep	4	4
No. of Circuits	6	6
Finned vol. (h,w,d)	24 x 25 x 3.5	24 x 25 x 3.5
Coil Surface Area (Sq. Ft.)	4.17	4.17
Fins per Inch	12	12
Tube Material	Copper	Copper
Tube OD (in.)	3/8	3/8
Wall Thickness	0.014	0.014
Return Bends	Copper	Copper

Table 16. Models GEV048-060 water-to-refrigerant coil

Model GEV	048	060
Working Pressure (psig)	780	660

Performance Data

Table 17. Horizontal GEH ARI-ISO performance

Unit Size	GPM	scfm	Cooling Btuh WHLP	EER WLPH	Heating Btuh WLHP	COP WLHP	Cooling Btuh GWHP	EER GWHP	Heating Btuh GWHP	COP GWHP	Cooling Btuh GLHP	EER GLHP	Heating Btuh GLHP	COP GLHP
006	1.8	215	7,500	12.60	9,300	4.60	8,600	18.36	7,900	4.00	7,900	14.10	6,000	3.30
009	2.1	285	8,800	13.00	11,300	4.90	10,100	18.00	9,300	4.20	9,300	14.50	7,200	3.40
012	2.8	380	11,700	14.00	14,600	4.90	12,700	20.00	12,000	4.20	12,000	15.40	9,300	3.40
015	3.5	475	14,300	13.50	18,300	4.50	15,800	20.60	15,300	4.00	14,800	15.40	12,100	3.30
018	4.2	570	18,000	13.30	21,900	4.80	19,500	19.50	18,100	4.20	18,500	14.90	14,300	3.40
024	5.6	760	24,000	14.40	29,700	4.70	26,800	21.80	24,900	4.20	25,100	16.80	19,300	3.40
030	7.0	900	28,200	13.80	35,700	4.60	32,000	20.40	29,800	4.10	29,500	15.70	22,800	3.40
036	8.4	1140	35,200	14.20	44,100	4.60	39,400	21.60	36,000	4.10	36,600	16.30	28,200	3.30
042	9.8	1330	41,500	13.60	51,900	4.60	45,900	19.50	42,900	4.00	43,100	15.40	34,100	3.40
048	11.2	1520	49,700	13.90	58,200	4.80	55,700	20.60	49,300	4.20	51,800	15.90	38,700	3.60
060	14.0	1900	59,700	13.40	70,500	4.50	66,200	19.30	58,000	4.00	62,200	15.40	46,400	3.40

Note: Rated in accordance with ISO Standard 13256-1: 1998 (Water-to-Air and Brine-to-Air Heat Pumps)
Certified conditions 80.6°F DB/66.2°F WB EAT in cooling and 68°F DB/59°F WB EAT in heating.

Table 18. Vertical GEV ARI-ISO performance

Unit Size	GPM	scfm	Cooling Btuh WHLP	EER WLPH	Heating Btuh WLHP	COP WLHP	Cooling Btuh GWHP	EER GWHP	Heating Btuh GWHP	COP GWHP	Cooling Btuh GLHP	EER GLHP	Heating Btuh GLHP	COP GLHP
006	1.8	215	7,600	12.81	9,500	4.80	8,500	18.90	8,000	4.10	7,800	14.81	6,200	3.30
009	2.1	285	8,800	13.00	11,300	5.10	10,000	18.10	9,300	4.30	9,100	14.60	7,200	3.50
012	2.8	380	11,600	14.00	14,900	5.00	12,800	20.80	12,200	4.30	12,000	15.80	9,400	3.50
015	3.5	475	14,400	13.80	18,300	4.90	15,900	21.30	15,000	4.20	14,800	15.60	11,700	3.50
018	4.2	570	17,800	13.10	22,200	4.80	19,400	19.20	18,400	4.10	18,300	14.70	14,500	3.50
024	5.6	760	24,700	14.70	29,500	4.80	26,900	22.40	24,600	4.30	25,500	17.00	19,500	3.50
030	7.0	900	28,800	14.40	34,900	4.90	31,900	21.60	29,300	4.30	29,900	16.50	23,200	3.60
036	8.4	1140	36,300	15.00	46,200	5.00	40,100	22.80	38,100	4.40	37,600	17.20	30,100	3.50
042	9.8	1330	41,000	13.90	51,700	4.70	45,900	20.50	42,800	4.10	43,100	16.00	33,800	3.50
048	11.2	1520	49,500	14.10	51,400	4.60	55,200	20.90	43,000	4.00	51,300	16.20	34,200	3.40
060	14.0	1900	61,600	14.00	71,700	4.80	67,600	20.00	58,600	4.20	64,100	15.90	46,800	3.50

Note: Rated in accordance with ISO Standard 13256-1: 1998 (Water-to-Air and Brine-to-Air Heat Pumps).
Certified conditions 80.6°F DB/66.2°F WB EAT in cooling and 68°F DB/59°F WB EAT in heating.

Table 19. GEH006 cooling performance

EWT	GPM	Total Mbtuh	Sen Mbtuh	SHR	Power kW	EER	Reject Mbtuh	LWT	Feet Head
45	1.1	8.4	6.2	0.73	0.48	17.4	10.1	63.4	2.0
45	1.4	8.5	6.2	0.73	0.47	18.1	10.1	59.5	3.1
45	1.6	8.5	6.2	0.72	0.47	18.3	10.1	57.7	4.0
45	1.7	8.6	6.2	0.72	0.46	18.5	10.1	56.9	4.4
45	1.8	8.7	6.2	0.72	0.47	18.6	10.3	56.4	4.9
45	1.9	8.7	6.3	0.72	0.46	18.7	10.3	55.8	5.4
45	2.0	8.7	6.3	0.72	0.46	18.8	10.3	55.3	5.9
55	1.1	8.1	6.0	0.74	0.52	15.7	9.9	73.0	2.0
55	1.4	8.2	6.0	0.74	0.50	16.3	9.9	69.2	3.0
55	1.6	8.2	6.1	0.74	0.50	16.6	9.9	67.4	3.8
55	1.7	8.2	6.1	0.74	0.49	16.7	9.9	66.7	4.2
55	1.8	8.3	6.1	0.74	0.49	16.8	9.9	66.1	4.7
55	1.9	8.3	6.1	0.73	0.49	16.8	9.9	65.5	5.2
55	2.0	8.3	6.1	0.73	0.49	17.0	10.0	65.0	5.6
68	1.1	7.8	5.9	0.75	0.57	13.6	9.8	85.7	1.9
68	1.4	7.9	5.9	0.75	0.56	14.1	9.8	81.9	2.9
68	1.6	7.9	5.9	0.75	0.55	14.4	9.8	80.2	3.6
68	1.7	7.9	5.9	0.75	0.55	14.5	9.8	79.5	4.1
68	1.8	7.9	5.9	0.75	0.55	14.6	9.8	78.9	4.5
68	1.9	7.9	5.9	0.75	0.54	14.6	9.8	78.3	4.9
68	2.0	8.0	6.0	0.75	0.54	14.7	9.8	77.8	5.4
77	1.1	7.6	5.8	0.76	0.62	12.3	9.7	94.7	1.8
77	1.4	7.7	5.8	0.76	0.60	12.7	9.7	90.9	2.8
77	1.6	7.7	5.8	0.76	0.59	12.9	9.7	89.1	3.5
77	1.7	7.7	5.9	0.76	0.59	13.0	9.7	88.4	3.9
GLHP 77	**1.8**	**7.7**	**5.9**	**0.76**	**0.59**	**13.1**	**9.7**	**87.8**	**4.3**
77	1.9	7.7	5.9	0.76	0.59	13.2	9.7	87.2	4.8
77	2.0	7.7	5.9	0.76	0.58	13.2	9.7	86.7	5.2
86	1.1	7.4	5.7	0.77	0.68	11.0	9.7	103.7	1.8
86	1.4	7.5	5.7	0.77	0.66	11.4	9.7	99.9	2.7
86	1.6	7.5	5.8	0.77	0.65	11.5	9.7	98.1	3.4
86	1.7	7.5	5.8	0.77	0.65	11.6	9.7	97.4	3.8
WLHP 86	**1.8**	**7.5**	**5.8**	**0.77**	**0.64**	**11.7**	**9.7**	**96.8**	**4.2**
86	1.9	7.5	5.8	0.77	0.64	11.7	9.7	96.2	4.7
86	2.0	7.5	5.8	0.77	0.64	11.8	9.7	95.7	5.1
95	1.1	7.2	5.6	0.78	0.74	9.7	9.7	112.7	1.7
95	1.4	7.2	5.7	0.78	0.72	10.0	9.7	108.8	2.6
95	1.6	7.2	5.7	0.78	0.71	10.2	9.7	107.1	3.3
95	1.7	7.3	5.7	0.78	0.71	10.3	9.7	106.4	3.7
95	1.8	7.3	5.7	0.78	0.70	10.3	9.7	105.7	4.1
95	1.9	7.3	5.7	0.78	0.70	10.4	9.7	105.2	4.5
95	2.0	7.3	5.7	0.78	0.69	10.4	9.6	104.6	5.0

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Table 19. GEH006 cooling performance (continued)

EWT	GPM	Total Mbtuh	Sen Mbtuh	SHR	Power kW	EER	Reject Mbtuh	LWT	Feet Head
105	1.1	6.9	5.5	0.80	0.82	8.4	9.7	122.6	1.7
105	1.4	6.9	5.5	0.80	0.80	8.7	9.6	118.8	2.6
105	1.6	6.9	5.5	0.80	0.79	8.8	9.6	117.1	3.3
105	1.7	7.0	5.5	0.80	0.79	8.9	9.6	116.3	3.6
105	1.8	7.0	5.5	0.80	0.78	8.9	9.6	115.7	4.0
105	1.9	7.0	5.5	0.80	0.78	8.9	9.6	115.1	4.4
105	2.0	7.0	5.6	0.80	0.78	9.0	9.6	114.6	4.8
110	1.1	6.7	5.4	0.81	0.87	7.7	9.7	127.6	1.7
110	1.4	6.8	5.5	0.81	0.85	7.9	9.7	123.8	2.5
110	1.6	6.8	5.5	0.81	0.84	8.1	9.6	122.1	3.2
110	1.7	6.8	5.5	0.81	0.83	8.1	9.6	121.3	3.6
110	1.8	6.8	5.5	0.81	0.83	8.2	9.6	120.7	4.0
110	1.9	6.8	5.5	0.81	0.82	8.2	9.6	120.1	4.3
110	2.0	6.8	5.5	0.81	0.82	8.2	9.6	119.6	4.8

Notes: Cooling performance data is tabulated at 80.6°F DB/66.2°F WB entering air at ARI/ISO 13256-1 rated cfm.For ARI/ISO 13256-1 certified ratings, see Table 17, p. 27. See Performance correction tables to correct performance at conditions other than those tabulated. Data shown is for unit performance only interpolation is permissible. Extrapolation is not. Rated GPM: 1.8 Minimum cfm 172; Rated cfm 215; Maximum cfm 258

Table 20. GEH006 heating performance

EWT	GPM	Htg Cap Mbtuh	Absorb Mbtuh	Power kW	COP	LWT	Feet Head
25	1.1	5.6	3.6	0.59	2.8	18.5	2.3
25	1.4	5.7	3.7	0.59	2.9	19.7	3.5
25	1.6	5.8	3.8	0.59	2.9	20.3	4.4
25	1.7	5.8	3.8	0.59	2.9	20.5	4.9
25	1.8	5.9	3.8	0.59	2.9	20.7	5.4
25	1.9	5.9	3.9	0.59	2.9	20.9	5.9
25	2.0	5.9	3.9	0.59	2.9	21.1	6.5
32	1.1	6.2	4.1	0.59	3.0	24.5	2.2
32	1.4	6.3	4.3	0.60	3.1	25.9	3.4
32	1.6	6.4	4.4	0.60	3.1	26.5	4.3
32	1.7	6.4	4.4	0.60	3.2	26.8	4.8
GLHP 32	**1.8**	**6.5**	**4.4**	**0.60**	**3.2**	**27.1**	**5.3**
32	1.9	6.5	4.5	0.60	3.2	27.3	5.8
32	2.0	6.5	4.5	0.60	3.2	27.5	6.3
45	1.1	7.4	5.3	0.62	3.5	35.3	1.8
45	1.4	7.6	5.5	0.62	3.6	37.1	2.7
45	1.6	7.7	5.6	0.62	3.6	38.0	3.4
45	1.7	7.8	5.6	0.62	3.7	38.4	3.8
45	1.8	7.8	5.7	0.62	3.7	38.7	4.2
45	1.9	7.8	5.7	0.62	3.7	39.0	4.6
45	2.0	7.8	5.7	0.62	3.7	39.3	5.1
55	1.1	8.3	6.2	0.64	3.8	43.8	1.7
55	1.4	8.6	6.4	0.64	3.9	45.8	2.6

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Table 20. GEH006 heating performance (continued)

EWT	GPM	Htg Cap Mbtuh	Absorb Mbtuh	Power kW	COP	LWT	Feet Head
55	1.6	8.7	6.5	0.64	4.0	46.9	3.3
55	1.7	8.7	6.5	0.64	4.0	47.3	3.7
55	1.8	8.8	6.6	0.65	4.0	47.7	4.1
55	1.9	8.8	6.6	0.65	4.0	48.1	4.5
55	2.0	8.9	6.6	0.65	4.0	48.4	4.9
68	1.1	9.5	7.3	0.66	4.2	54.8	1.7
68	1.4	9.8	7.5	0.67	4.3	57.3	2.5
68	1.6	10.0	7.7	0.67	4.3	58.4	3.2
68	1.7	10.0	7.7	0.67	4.3	59.0	3.5
GLHP 68	**1.8**	**10.0**	**7.7**	**0.67**	**4.4**	**59.4**	**3.9**
68	1.9	10.1	7.8	0.67	4.4	59.8	4.3
68	2.0	10.1	7.8	0.68	4.4	60.2	4.7
75	1.1	10.2	7.9	0.68	4.4	60.7	1.6
75	1.4	10.4	8.1	0.68	4.5	63.4	2.4
75	1.6	10.6	8.3	0.69	4.5	64.6	3.1
75	1.7	10.7	8.3	0.69	4.5	65.2	3.4
75	1.8	10.7	8.3	0.69	4.6	65.7	3.8
75	1.9	10.7	8.4	0.69	4.6	66.2	4.2
75	2.0	10.8	8.4	0.69	4.6	66.6	4.5
86	1.1	11.1	8.8	0.70	4.7	70.1	1.6
86	1.4	11.5	9.1	0.71	4.7	73.0	2.4
86	1.6	11.6	9.2	0.71	4.8	74.5	3.0
86	1.7	11.7	9.3	0.72	4.8	75.1	3.3
86	1.8	11.8	9.3	0.72	4.8	75.6	3.7
86	1.9	11.8	9.4	0.72	4.8	76.1	4.0
86	2.0	11.9	9.4	0.72	4.8	76.6	4.4

Notes: Heating performance data is tabulated at 68°F DB entering air at ARI/ISO 13256-1 rated cfm. For ARI/ISO 13256-1 certified ratings, see Table 17, p. 27. See Performance correction tables to correct performance at conditions other than those tabulated. Data shown is for unit performance only. Interpolation is permissible. Extrapolation is not. Rated GPM: 1.8 Minimum cfm 172; Rated cfm 215; Maximum cfm 258

Table 21. GEH006 fan correction factors

Entering cfm	Cooling Capacity	Sensible Capacity	Cooling Input Watts	Heating Capacity	Heating Input Watts
172	0.956	0.878	1.002	0.982	1.093
183	0.964	0.907	0.998	0.990	1.066
194	0.979	0.939	1.000	0.995	1.041
204	0.990	0.970	1.000	1.000	1.019
215	1.000	1.000	1.000	1.000	1.000
237	1.018	1.060	1.000	1.012	0.970
247	1.026	1.088	1.000	1.015	0.956
258	1.034	1.118	1.000	1.015	0.942

Table 22. GEV006 cooling performance

EWT	GPM	Total Mbtuh	Sen Mbtuh	SHR	Power kW	EER	Reject Mbtuh	LWT	Feet Head
45	1.1	8.5	6.1	0.71	0.50	17.0	10.2	63.5	1.3
45	1.4	8.6	6.1	0.71	0.49	17.5	10.3	59.7	2.0
45	1.6	8.6	6.1	0.71	0.49	17.8	10.3	57.9	2.6
45	1.7	8.6	6.1	0.71	0.48	17.8	10.3	57.1	2.9
45	1.8	8.7	6.1	0.71	0.48	17.9	10.3	56.4	3.2
45	1.9	8.6	6.1	0.71	0.48	18.0	10.3	55.8	3.5
45	2.0	8.6	6.1	0.71	0.48	18.0	10.3	55.3	3.8
55	1.1	8.0	5.9	0.73	0.52	15.5	9.8	72.8	1.3
55	1.4	8.1	5.9	0.73	0.50	16.0	9.8	69.0	2.0
55	1.6	8.1	5.9	0.73	0.50	16.2	9.8	67.3	2.5
55	1.7	8.1	5.9	0.73	0.50	16.3	9.8	66.6	2.8
55	1.8	8.1	5.9	0.73	0.50	16.4	9.8	65.9	3.1
55	1.9	8.2	5.9	0.73	0.49	16.5	9.8	65.4	3.4
55	2.0	8.2	5.9	0.73	0.49	16.6	9.8	64.8	3.7
68	1.1	7.8	5.8	0.74	0.58	13.5	9.7	85.7	1.2
68	1.4	7.8	5.8	0.74	0.56	13.9	9.7	81.9	1.9
68	1.6	7.8	5.8	0.74	0.55	14.2	9.7	80.2	2.4
68	1.7	7.8	5.8	0.74	0.55	14.3	9.7	79.4	2.6
68	1.8	7.9	5.8	0.74	0.55	14.4	9.7	78.8	2.9
68	1.9	7.9	5.8	0.74	0.55	14.4	9.7	78.2	3.2
68	2.0	7.9	5.8	0.74	0.54	14.5	9.7	77.7	3.5
77	1.1	7.6	5.7	0.75	0.63	12.1	9.7	94.7	1.2
77	1.4	7.6	5.7	0.75	0.61	12.5	9.7	90.8	1.8
77	1.6	7.6	5.7	0.75	0.60	12.7	9.7	89.1	2.3
77	1.7	7.6	5.7	0.75	0.60	12.8	9.7	88.4	2.6
GLHP 77	**1.8**	**7.7**	**5.7**	**0.75**	**0.59**	**12.9**	**9.7**	**87.8**	**2.8**
77	1.9	7.7	5.7	0.75	0.59	13.0	9.7	87.2	3.1
77	2.0	7.7	5.7	0.75	0.59	13.0	9.7	86.7	3.4
86	1.1	7.4	5.6	0.76	0.68	10.8	9.7	103.6	1.2
86	1.4	7.4	5.6	0.76	0.66	11.2	9.7	99.8	1.8
86	1.6	7.4	5.6	0.76	0.65	11.3	9.6	98.1	2.2
86	1.7	7.4	5.6	0.76	0.65	11.4	9.6	97.3	2.5
WLHP 86	**1.8**	**7.4**	**5.6**	**0.76**	**0.65**	**11.5**	**9.6**	**96.7**	**2.8**
86	1.9	7.4	5.6	0.76	0.64	11.5	9.6	96.1	3.0
86	2.0	7.4	5.6	0.76	0.64	11.6	9.6	95.6	3.3
95	1.1	7.1	5.5	0.77	0.75	9.5	9.7	112.6	1.1
95	1.4	7.1	5.5	0.77	0.73	9.8	9.6	108.7	1.7
95	1.6	7.2	5.5	0.77	0.72	10.0	9.6	107.0	2.2
95	1.7	7.2	5.5	0.77	0.71	10.0	9.6	106.3	2.4
95	1.8	7.2	5.5	0.77	0.71	10.1	9.6	105.7	2.7
95	1.9	7.2	5.5	0.77	0.71	10.1	9.6	105.1	3.0
95	2.0	7.2	5.5	0.77	0.71	10.2	9.6	104.6	3.2

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Table 22. GEV006 cooling performance (continued)

EWT	GPM	Total Mbtuh	Sen Mbtuh	SHR	Power kW	EER	Reject Mbtuh	LWT	Feet Head
105	1.1	6.8	5.4	0.79	0.84	8.1	9.7	122.6	1.1
105	1.4	6.8	5.4	0.79	0.82	8.4	9.6	118.8	1.7
105	1.6	6.9	5.4	0.79	0.81	8.5	9.6	117.0	2.1
105	1.7	6.9	5.4	0.79	0.80	8.6	9.6	116.3	2.4
105	1.8	6.9	5.4	0.79	0.80	8.6	9.6	115.7	2.6
105	1.9	6.9	5.4	0.79	0.79	8.6	9.6	115.1	2.9
105	2.0	6.9	5.4	0.79	0.79	8.7	9.6	114.6	3.1
110	1.1	6.6	5.3	0.80	0.91	7.3	9.7	127.7	1.1
110	1.4	6.7	5.3	0.80	0.88	7.6	9.7	123.8	1.7
110	1.6	6.7	5.3	0.80	0.87	7.7	9.6	122.1	2.1
110	1.7	6.7	5.3	0.80	0.86	7.7	9.6	121.3	2.3
110	1.8	6.7	5.3	0.80	0.86	7.8	9.6	120.7	2.6
110	1.9	6.7	5.3	0.80	0.86	7.8	9.6	120.1	2.8
110	2.0	6.7	5.3	0.80	0.85	7.8	9.6	119.6	3.1

Notes: Cooling performance data is tabulated at 80.6°F DB/66.2°F WB entering air at ARI/ISO 13256-1 rated cfm. For ARI/ISO 13256-1 certified ratings, see Table 18, p. 27. See Performance correction tables to correct performance at conditions other than those tabulated. Data shown is for unit performance only. Interpolation is permissible. Extrapolation is not. Rated GPM: 1.8 Minimum cfm 172; Rated cfm 215; Maximum cfm 258

Table 23. GEV006 heating performance

EWT	GPM	Htg Cap Mbtuh	Absorb Mbtuh	Power kW	COP	LWT	Feet Head
25	1.1	5.6	3.6	0.59	2.8	18.5	2.0
25	1.4	5.7	3.7	0.59	2.9	19.7	3.1
25	1.6	5.8	3.8	0.59	2.9	20.3	3.9
25	1.7	5.8	3.8	0.59	2.9	20.5	4.3
25	1.8	5.8	3.8	0.59	2.9	20.7	4.7
25	1.9	5.9	3.9	0.59	2.9	20.9	5.2
25	2.0	5.9	3.9	0.59	2.9	21.1	5.7
32	1.1	6.2	4.1	0.59	3.0	24.5	2.0
32	1.4	6.3	4.3	0.60	3.1	25.9	3.0
32	1.6	6.4	4.4	0.60	3.1	26.5	3.8
32	1.7	6.4	4.4	0.60	3.2	26.8	4.2
GLHP 32	**1.8**	**6.5**	**4.4**	**0.60**	**3.2**	**27.1**	**4.6**
32	1.9	6.5	4.5	0.60	3.2	27.3	5.1
32	2.0	6.5	4.5	0.60	3.2	27.5	5.5
45	1.1	7.4	5.3	0.61	3.5	35.3	1.6
45	1.4	7.6	5.5	0.62	3.6	37.1	2.4
45	1.6	7.7	5.6	0.62	3.7	38.0	3.0
45	1.7	7.8	5.7	0.62	3.7	38.3	3.4
45	1.8	7.8	5.7	0.62	3.7	38.7	3.7
45	1.9	7.8	5.7	0.62	3.7	39.0	4.1
45	2.0	7.9	5.7	0.62	3.7	39.3	4.5
55	1.1	8.3	6.2	0.63	3.9	43.7	1.5
55	1.4	8.6	6.4	0.64	4.0	45.8	2.3

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Table 23. GEV006 heating performance (continued)

EWT	GPM	Htg Cap Mbtuh	Absorb Mbtuh	Power kW	COP	LWT	Feet Head
55	1.6	8.7	6.5	0.64	4.0	46.8	2.9
55	1.7	8.7	6.6	0.64	4.0	47.3	3.2
55	1.8	8.8	6.6	0.64	4.0	47.7	3.6
55	1.9	8.8	6.6	0.64	4.0	48.0	3.9
55	2.0	8.9	6.7	0.64	4.0	48.3	4.3
68	1.1	9.5	7.3	0.66	4.3	54.8	1.4
68	1.4	9.8	7.6	0.66	4.4	57.2	2.2
68	1.6	9.9	7.7	0.66	4.4	58.4	2.8
68	1.7	10.0	7.7	0.66	4.4	58.9	3.1
WLHP 68	**1.8**	**10.0**	**7.8**	**0.67**	**4.4**	**59.4**	**3.4**
68	1.9	10.1	7.8	0.67	4.4	59.8	3.7
68	2.0	10.2	7.9	0.67	4.5	60.1	4.1
75	1.1	10.2	7.9	0.67	4.5	60.6	1.4
75	1.4	10.5	8.2	0.68	4.5	63.3	2.1
75	1.6	10.6	8.3	0.68	4.6	64.6	2.7
75	1.7	10.7	8.4	0.68	4.6	65.2	3.0
75	1.8	10.7	8.4	0.68	4.6	65.7	3.3
75	1.9	10.8	8.4	0.68	4.6	66.1	3.6
75	2.0	10.8	8.5	0.68	4.6	66.5	4.0
86	1.1	11.2	8.8	0.69	4.7	70.0	1.4
86	1.4	11.5	9.1	0.70	4.8	73.0	2.1
86	1.6	11.6	9.2	0.70	4.9	74.5	2.6
86	1.7	11.7	9.3	0.70	4.9	75.1	2.9
86	1.8	11.8	9.4	0.71	4.9	75.6	3.2
86	1.9	11.8	9.4	0.71	4.9	76.1	3.5
86	2.0	11.8	9.4	0.71	4.9	76.6	3.8

Notes: Heating performance data is tabulated at 68°F DB entering air at ARI/ISO 13256-1 rated cfm. For ARI/ISO 13256-1 certified ratings, see Table 18, p. 27. See Performance correction tables to correct performance at conditions other than those tabulated. Data shown is for unit performance only. Interpolation is permissible. Extrapolation is not. Rated GPM: 1.8 Minimum cfm 172; Rated cfm 215; Maximum cfm 258

Table 24. GEV006 fan correction factors

Entering cfm	Cooling Capacity	Sensible Capacity	Cooling Input Watts	Heating Capacity	Heating Input Watts
172	0.956	0.882	1.006	0.983	1.094
183	0.969	0.912	1.004	0.988	1.066
194	0.980	0.941	1.003	0.989	1.039
204	0.991	0.971	1.002	0.997	1.020
215	1.000	1.000	1.000	1.000	1.000
237	1.019	1.060	0.999	1.009	0.969
247	1.027	1.090	0.998	1.010	0.954
258	1.035	1.120	0.998	1.014	0.942

Table 25. GEH009 cooling performance

EWT	GPM	Total Mbtuh	Sen Mbtuh	SHR	Power kW	EER	Reject Mbtuh	LWT	Feet Head
45	1.4	10.2	7.6	0.75	0.55	18.6	12.1	62.3	2.0
45	1.7	10.3	7.7	0.74	0.54	19.0	12.2	59.4	2.8
45	1.9	10.4	7.7	0.74	0.54	19.3	12.3	57.9	3.4
45	2.1	10.5	7.7	0.74	0.54	19.5	12.3	56.7	4.0
45	2.2	10.5	7.8	0.74	0.54	19.6	12.4	56.2	4.4
45	2.3	10.6	7.8	0.74	0.54	19.7	12.4	55.8	4.7
45	2.5	10.6	7.8	0.73	0.53	19.9	12.4	55.0	5.5
55	1.4	9.8	7.5	0.76	0.58	16.8	11.7	71.8	1.9
55	1.7	9.9	7.5	0.76	0.57	17.3	11.8	68.9	2.7
55	1.9	9.9	7.5	0.76	0.57	17.5	11.9	67.5	3.2
55	2.1	10.0	7.5	0.76	0.56	17.7	11.9	66.3	3.9
55	2.2	10.0	7.6	0.76	0.56	17.8	11.9	65.8	4.2
55	2.3	10.0	7.6	0.75	0.56	17.9	11.9	65.4	4.6
55	2.5	10.0	7.6	0.75	0.56	18.0	11.9	64.6	5.3
68	1.4	9.3	7.3	0.78	0.64	14.6	11.5	84.4	1.8
68	1.7	9.4	7.3	0.78	0.62	15.0	11.5	81.5	2.5
68	1.9	9.4	7.3	0.78	0.62	15.2	11.5	80.1	3.1
68	2.1	9.4	7.3	0.78	0.61	15.4	11.5	79.0	3.7
68	2.2	9.5	7.4	0.78	0.61	15.5	11.5	78.5	4.0
68	2.3	9.5	7.4	0.78	0.61	15.5	11.6	78.0	4.3
68	2.5	9.5	7.4	0.78	0.61	15.6	11.6	77.3	5.0
77	1.4	9.0	7.2	0.80	0.69	13.0	11.4	93.3	1.8
77	1.7	9.1	7.2	0.79	0.68	13.4	11.4	90.4	2.5
77	1.9	9.1	7.2	0.79	0.67	13.6	11.4	89.0	3.0
GLHP 77	**2.1**	**9.1**	**7.2**	**0.79**	**0.66**	**13.7**	**11.4**	**87.8**	**3.6**
77	2.2	9.1	7.2	0.79	0.66	13.8	11.4	87.4	3.9
77	2.3	9.1	7.2	0.79	0.66	13.9	11.4	86.9	4.2
77	2.5	9.2	7.2	0.79	0.65	14.0	11.4	86.1	4.9
86	1.4	8.7	7.1	0.81	0.76	11.6	11.3	102.2	1.7
86	1.7	8.8	7.1	0.81	0.74	11.9	11.3	99.3	2.4
86	1.9	8.8	7.1	0.81	0.73	12.0	11.3	97.9	2.9
WLHP 86	**2.1**	**8.8**	**7.1**	**0.81**	**0.72**	**12.2**	**11.3**	**96.7**	**3.5**
86	2.2	8.8	7.1	0.81	0.72	12.2	11.3	96.2	3.8
86	2.3	8.8	7.1	0.81	0.72	12.3	11.3	95.8	4.1
86	2.5	8.8	7.1	0.81	0.72	12.4	11.3	95.0	4.8
95	1.4	8.5	7.0	0.82	0.84	10.1	11.3	111.2	1.7
95	1.7	8.5	7.0	0.82	0.82	10.4	11.3	108.3	2.3
95	1.9	8.5	7.0	0.82	0.81	10.5	11.3	106.9	2.9
95	2.1	8.5	7.0	0.82	0.80	10.6	11.3	105.7	3.4
95	2.2	8.5	7.0	0.82	0.80	10.6	11.2	105.2	3.7
95	2.3	8.5	7.0	0.82	0.80	10.7	11.2	104.8	4.0
95	2.5	8.5	7.0	0.82	0.79	10.8	11.2	104.0	4.6

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Table 25. GEH009 cooling performance (continued)

EWT	GPM	Total Mbtuh	Sen Mbtuh	SHR	Power kW	EER	Reject Mbtuh	LWT	Feet Head
105	1.4	8.2	6.9	0.84	0.96	8.6	11.5	121.4	1.6
105	1.7	8.2	6.9	0.84	0.94	8.8	11.4	118.4	2.3
105	1.9	8.2	6.9	0.84	0.92	8.9	11.4	117.0	2.8
105	2.1	8.2	6.9	0.84	0.92	9.0	11.3	115.8	3.3
105	2.2	8.2	6.9	0.84	0.91	9.0	11.3	115.3	3.6
105	2.3	8.2	6.9	0.84	0.91	9.0	11.3	114.8	3.9
105	2.5	8.2	6.9	0.84	0.90	9.1	11.3	114.0	4.5
110	1.4	8.1	6.8	0.84	1.06	7.7	11.8	126.8	1.6
110	1.7	8.1	6.8	0.84	1.04	7.9	11.7	123.7	2.2
110	1.9	8.1	6.8	0.84	1.01	8.0	11.5	122.1	2.7
110	2.1	8.1	6.8	0.84	1.01	8.0	11.6	121.0	3.3
110	2.2	8.1	6.8	0.84	1.00	8.1	11.5	120.5	3.5
110	2.3	8.1	6.8	0.84	0.99	8.1	11.5	120.0	3.8
110	2.5	8.1	6.8	0.84	1.00	8.1	11.5	119.2	4.4

Notes: Cooling performance data is tabulated at 80.6°F DB/66.2°F WB entering air at ARI/ISO 13256-1 rated cfm. For ARI/ISO 13256-1 certified ratings, see Table 17, p. 27. See Performance correction tables to correct performance at conditions other than those tabulated. Data shown is for unit performance only. Interpolation is permissible. Extrapolation is not.Rated GPM: 2.1 Minimum cfm 228; Rated cfm 285; Maximum cfm 342

Table 26. GEH009 heating performance

EWT	GPM	Htg Cap Mbtuh	Absorb Mbtuh	Power kW	COP	LWT	Feet Head
25	1.4	6.4	4.2	0.64	2.9	19.0	2.8
25	1.7	6.5	4.3	0.64	3.0	19.9	4.0
25	1.9	6.6	4.4	0.64	3.0	20.4	4.8
25	2.1	6.6	4.4	0.64	3.0	20.8	5.7
25	2.2	6.7	4.5	0.64	3.0	20.9	6.2
25	2.3	6.7	4.5	0.64	3.0	21.1	6.7
25	2.5	6.7	4.5	0.65	3.1	21.4	7.8
32	1.4	7.1	4.8	0.65	3.2	25.1	2.8
32	1.7	7.2	5.0	0.65	3.2	26.1	3.9
32	1.9	7.3	5.1	0.66	3.3	26.7	4.7
GLHP 32	**2.1**	**7.4**	**5.1**	**0.66**	**3.3**	**27.1**	**5.6**
32	2.2	7.4	5.1	0.66	3.3	27.3	6.0
32	2.3	7.4	5.2	0.66	3.3	27.5	6.5
32	2.5	7.5	5.2	0.66	3.3	27.8	7.5
45	1.4	8.5	6.2	0.68	3.7	36.1	2.2
45	1.7	8.7	6.4	0.68	3.8	37.5	3.1
45	1.9	8.8	6.5	0.68	3.8	38.2	3.8
45	2.1	8.9	6.6	0.68	3.8	38.7	4.5
45	2.2	8.9	6.6	0.68	3.8	39.0	4.9
45	2.3	9.0	6.6	0.68	3.9	39.2	5.2
45	2.5	9.0	6.7	0.68	3.9	39.6	6.1
55	1.4	9.6	7.3	0.69	4.1	44.6	2.1
55	1.7	9.8	7.5	0.70	4.2	46.2	3.0

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Table 26. GEH009 heating performance (continued)

EWT	GPM	Htg Cap Mbtuh	Absorb Mbtuh	Power kW	COP	LWT	Feet Head
55	1.9	9.9	7.6	0.70	4.2	47.0	3.6
55	2.1	10.1	7.7	0.70	4.2	47.7	4.3
55	2.2	10.1	7.7	0.70	4.2	48.0	4.7
55	2.3	10.1	7.8	0.70	4.3	48.3	5.0
55	2.5	10.2	7.8	0.70	4.3	48.7	5.8
68	1.4	11.1	8.6	0.71	4.6	55.7	2.0
68	1.7	11.4	8.9	0.72	4.6	57.5	2.8
68	1.9	11.5	9.1	0.72	4.7	58.5	3.5
WLHP 68	**2.1**	**11.6**	**9.2**	**0.72**	**4.7**	**59.3**	**4.1**
68	2.2	11.6	9.2	0.72	4.7	59.6	4.5
68	2.3	11.7	9.2	0.72	4.7	60.0	4.8
68	2.5	11.8	9.3	0.72	4.8	60.5	5.6
75	1.4	11.9	9.4	0.73	4.8	61.5	2.0
75	1.7	12.2	9.7	0.73	4.9	63.6	2.8
75	1.9	12.3	9.8	0.73	4.9	64.7	3.4
75	2.1	12.5	10.0	0.74	5.0	65.5	4.0
75	2.2	12.6	10.0	0.74	5.0	65.9	4.3
75	2.3	12.6	10.1	0.74	5.0	66.3	4.7
75	2.5	12.7	10.1	0.74	5.0	66.9	5.4
86	1.4	13.2	10.6	0.75	5.1	70.8	1.9
86	1.7	13.5	10.9	0.76	5.2	73.2	2.7
86	1.9	13.7	11.1	0.76	5.3	74.3	3.3
86	2.1	13.8	11.2	0.76	5.3	75.3	3.9
86	2.2	13.9	11.3	0.76	5.3	75.8	4.2
86	2.3	13.9	11.3	0.77	5.3	76.2	4.5
86	2.5	14.1	11.4	0.77	5.3	76.9	5.2

Notes: Heating performance data is tabulated at 68°F DB entering air at ARI/ISO 13256-1 rated cfm. For ARI/ISO 13256-1 certified ratings, see Table 17, p. 27. See Performance correction tables to correct performance at conditions other than those tabulated. Data shown is for unit performance only. Interpolation is permissible. Extrapolation is not. Rated GPM: 2.1 Minimum cfm 228; Rated cfm 285; Maximum cfm 342

Table 27. GEH009 correction factors

Entering cfm	Cooling Capacity	Sensible Capacity	Cooling Input Watts	Heating Capacity	Heating Input Watts
228	0.960	0.876	1.003	0.984	1.087
242	0.971	0.907	1.002	0.990	1.060
257	0.982	0.937	1.002	0.990	1.036
271	0.992	0.969	1.002	0.995	1.017
285	1.000	1.000	1.000	1.000	1.000
314	1.017	1.060	1.001	1.003	0.969
328	1.022	1.088	0.999	1.007	0.957
342	1.028	1.121	0.998	1.008	0.946

Table 28. GEV009 cooling performance

EWT	GPM	Total Mbtuh	Sen Mbtuh	SHR	Power kW	EER	Reject Mbtuh	LWT	Feet Head
45	1.4	10.1	7.5	0.74	0.55	18.4	12.0	62.1	2.1
45	1.7	10.2	7.5	0.74	0.54	18.8	12.1	59.2	2.9
45	1.9	10.3	7.6	0.74	0.54	19.1	12.1	57.8	3.6
45	2.1	10.3	7.6	0.73	0.54	19.3	12.2	56.6	4.2
45	2.2	10.4	7.6	0.73	0.53	19.4	12.2	56.1	4.6
45	2.3	10.4	7.6	0.73	0.53	19.5	12.2	55.6	5.0
45	2.5	10.4	7.6	0.73	0.53	19.6	12.3	54.8	5.8
55	1.4	9.6	7.3	0.76	0.58	16.6	11.5	71.5	2.0
55	1.7	9.7	7.3	0.76	0.57	17.1	11.6	68.6	2.8
55	1.9	9.7	7.4	0.76	0.56	17.3	11.7	67.3	3.4
55	2.1	9.8	7.4	0.75	0.56	17.5	11.7	66.1	4.1
55	2.2	9.8	7.4	0.75	0.56	17.6	11.7	65.6	4.4
55	2.3	9.8	7.4	0.75	0.56	17.7	11.7	65.2	4.8
55	2.5	9.9	7.4	0.75	0.56	17.8	11.8	64.4	5.6
68	1.4	9.1	7.1	0.78	0.63	14.4	11.3	84.2	1.9
68	1.7	9.2	7.2	0.78	0.62	14.9	11.3	81.3	2.7
68	1.9	9.2	7.2	0.78	0.61	15.1	11.3	79.9	3.3
68	2.1	9.3	7.2	0.78	0.61	15.2	11.4	78.8	3.9
68	2.2	9.3	7.2	0.77	0.61	15.3	11.4	78.3	4.2
68	2.3	9.3	7.2	0.77	0.61	15.4	11.4	77.9	4.6
68	2.5	9.3	7.2	0.77	0.60	15.5	11.4	77.1	5.3
77	1.4	8.9	7.0	0.79	0.68	13.0	11.2	93.0	1.8
77	1.7	8.9	7.1	0.79	0.67	13.3	11.2	90.2	2.6
77	1.9	8.9	7.1	0.79	0.66	13.5	11.2	88.8	3.2
GLHP 77	**2.1**	**9.0**	**7.1**	**0.79**	**0.66**	**13.6**	**11.2**	**87.7**	**3.8**
77	2.2	9.0	7.1	0.79	0.66	13.7	11.2	87.2	4.1
77	2.3	9.0	7.1	0.79	0.65	13.8	11.2	86.7	4.4
77	2.5	9.0	7.1	0.79	0.65	13.9	11.2	86.0	5.1
86	1.4	8.6	6.9	0.81	0.75	11.5	11.2	101.9	1.8
86	1.7	8.6	7.0	0.81	0.73	11.8	11.1	99.1	2.5
86	1.9	8.7	7.0	0.80	0.72	12.0	11.1	97.7	3.1
WLHP 86	**2.1**	**8.7**	**7.0**	**0.80**	**0.72**	**12.1**	**11.1**	**96.6**	**3.7**
86	2.2	8.7	7.0	0.80	0.71	12.2	11.1	96.1	4.0
86	2.3	8.7	7.0	0.80	0.71	12.2	11.1	95.7	4.3
86	2.5	8.7	7.0	0.80	0.71	12.3	11.1	94.9	5.0
95	1.4	8.4	6.9	0.82	0.83	10.1	11.2	111.0	1.7
95	1.7	8.4	6.9	0.82	0.81	10.4	11.1	108.1	2.5
95	1.9	8.4	6.9	0.82	0.80	10.5	11.1	106.7	3.0
95	2.1	8.4	6.9	0.82	0.79	10.6	11.1	105.6	3.6
95	2.2	8.4	6.9	0.82	0.79	10.6	11.1	105.1	3.9
95	2.3	8.4	6.9	0.82	0.79	10.7	11.1	104.6	4.2
95	2.5	8.4	6.9	0.82	0.78	10.8	11.1	103.8	4.9

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Table 28. GEV009 cooling performance (continued)

EWT	GPM	Total Mbtuh	Sen Mbtuh	SHR	Power kW	EER	Reject Mbtuh	LWT	Feet Head
105	1.4	8.1	6.8	0.83	0.94	8.6	11.3	121.2	1.7
105	1.7	8.1	6.8	0.83	0.92	8.8	11.2	118.2	2.4
105	1.9	8.1	6.8	0.83	0.91	8.9	11.2	116.8	2.9
105	2.1	8.1	6.8	0.83	0.90	9.0	11.2	115.6	3.5
105	2.2	8.1	6.8	0.83	0.89	9.1	11.1	115.1	3.8
105	2.3	8.1	6.8	0.83	0.89	9.1	11.1	114.7	4.1
105	2.5	8.1	6.8	0.83	0.89	9.1	11.1	113.9	4.7
110	1.4	8.0	6.7	0.84	1.03	7.8	11.5	126.5	1.7
110	1.7	8.0	6.7	0.84	1.01	8.0	11.4	123.5	2.4
110	1.9	8.0	6.7	0.84	0.99	8.1	11.4	122.0	2.9
110	2.1	8.0	6.7	0.84	0.98	8.1	11.3	120.8	3.4
110	2.2	8.0	6.7	0.84	0.98	8.2	11.3	120.3	3.7
110	2.3	8.0	6.7	0.84	0.97	8.2	11.3	119.8	4.0
110	2.5	8.0	6.7	0.84	0.97	8.2	11.3	119.0	4.7

Notes: Cooling performance data is tabulated at 80.6°F DB/66.2°F WB entering air at ARI/ISO 13256-1 rated cfm. For ARI/ISO 13256-1 certified ratings, see Table 18, p. 27. See Performance correction tables to correct performance at conditions other than those tabulated. Data shown is for unit performance only. Interpolation is permissible. Extrapolation is not. Rated GPM: 2.1 Minimum cfm 228; Rated cfm 285; Maximum cfm 342

Table 29. GEV009 heating performance

EWT	GPM	Htg Cap Mbtuh	Absorb Mbtuh	Power kW	COP	LWT	Feet Head
25	1.4	6.5	4.3	0.63	3.0	18.8	3.0
25	1.7	6.6	4.4	0.64	3.0	19.8	4.3
25	1.9	6.7	4.5	0.64	3.1	20.3	5.2
25	2.1	6.7	4.5	0.64	3.1	20.7	6.2
25	2.2	6.7	4.6	0.64	3.1	20.9	6.7
25	2.3	6.8	4.6	0.64	3.1	21.0	7.2
25	2.5	6.8	4.6	0.64	3.1	21.3	8.3
32	1.4	7.1	4.9	0.64	3.2	25.0	3.0
32	1.7	7.3	5.1	0.65	3.3	26.0	4.1
32	1.9	7.3	5.1	0.65	3.3	26.6	5.0
GLHP 32	**2.1**	**7.4**	**5.2**	**0.65**	**3.3**	**27.1**	**6.0**
32	2.2	7.4	5.2	0.65	3.4	27.3	6.5
32	2.3	7.5	5.2	0.65	3.4	27.4	7.0
32	2.5	7.5	5.3	0.65	3.4	27.8	8.1
45	1.4	8.5	6.3	0.66	3.8	36.1	2.4
45	1.7	8.7	6.4	0.67	3.8	37.4	3.3
45	1.9	8.8	6.5	0.67	3.9	38.2	4.0
45	2.1	8.8	6.6	0.67	3.9	38.7	4.8
45	2.2	8.9	6.6	0.67	3.9	39.0	5.2
45	2.3	8.9	6.6	0.67	3.9	39.2	5.6
45	2.5	9.0	6.7	0.67	3.9	39.7	6.5
55	1.4	9.6	7.3	0.68	4.1	44.6	2.3
55	1.7	9.8	7.4	0.68	4.2	46.2	3.2

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Table 29. GEV009 heating performance (continued)

EWT	GPM	Htg Cap Mbtuh	Absorb Mbtuh	Power kW	COP	LWT	Feet Head
55	1.9	9.8	7.5	0.68	4.2	47.1	3.9
55	2.1	9.9	7.6	0.68	4.3	47.8	4.6
55	2.2	10.0	7.6	0.68	4.3	48.1	5.0
55	2.3	10.0	7.7	0.68	4.3	48.3	5.4
55	2.5	10.1	7.7	0.68	4.3	48.8	6.3
68	1.4	10.9	8.5	0.69	4.6	55.8	2.2
68	1.7	11.2	8.8	0.69	4.7	57.7	3.1
68	1.9	11.3	8.9	0.70	4.7	58.6	3.7
WLHP 68	**2.1**	**11.4**	**9.0**	**0.70**	**4.8**	**59.4**	**4.4**
68	2.2	11.4	9.0	0.70	4.8	59.8	4.8
68	2.3	11.4	9.1	0.70	4.8	60.1	5.2
68	2.5	11.5	9.1	0.70	4.8	60.7	6.0
75	1.4	11.6	9.2	0.70	4.9	61.8	2.1
75	1.7	11.9	9.5	0.70	5.0	63.8	3.0
75	1.9	12.0	9.6	0.71	5.0	64.9	3.6
75	2.1	12.1	9.7	0.71	5.0	65.7	4.3
75	2.2	12.2	9.8	0.71	5.0	66.1	4.7
75	2.3	12.2	9.8	0.71	5.1	66.5	5.0
75	2.5	12.3	9.9	0.71	5.1	67.1	5.8
86	1.4	12.8	10.3	0.72	5.2	71.2	2.1
86	1.7	13.1	10.6	0.72	5.3	73.5	2.9
86	1.9	13.2	10.7	0.72	5.4	74.7	3.5
86	2.1	13.3	10.8	0.72	5.4	75.7	4.2
86	2.2	13.4	10.9	0.73	5.4	76.1	4.5
86	2.3	13.4	11.0	0.73	5.4	76.5	4.9
86	2.5	13.5	11.0	0.73	5.4	77.2	5.6

Notes: Heating performance data is tabulated at 68°F DB entering air at ARI/ISO 13256-1 rated cfm. For ARI/ISO 13256-1 certified ratings, see Table 18, p. 27. See Performance correction tables to correct performance at conditions other than those tabulated. Data shown is for unit performance only. Interpolation is permissible. Extrapolation is not. Rated GPM: 2.1 Minimum cfm 228; Rated cfm 285; Maximum cfm 342

Table 30. GEV009 fan correction factors

Entering cfm	Cooling Capacity	Sensible Capacity	Cooling Input Watts	Heating Capacity	Heating Input Watts
228	0.959	0.874	1.005	0.979	1.075
242	0.969	0.905	1.002	0.985	1.053
257	0.981	0.937	1.002	0.991	1.033
271	0.991	0.968	1.001	0.994	1.014
285	1.000	1.000	1.000	1.000	1.000
314	1.017	1.066	0.997	1.006	0.972
328	1.020	1.093	0.993	1.012	0.962
342	1.027	1.123	0.993	1.011	0.950

Table 31. GEH012 cooling performance

EWT	GPM	Total Mbtuh	Sen Mbtuh	SHR	Power kW	EER	Reject Mbtuh	LWT	Feet Head
45	1.8	12.6	9.7	0.76	0.63	20.0	14.8	61.5	1.9
45	2.2	12.7	9.7	0.76	0.62	20.6	14.8	58.5	2.7
45	2.5	12.7	9.7	0.76	0.61	21.0	14.8	56.8	3.4
45	2.8	12.8	9.7	0.76	0.60	21.3	14.8	55.6	4.1
45	2.9	12.8	9.7	0.76	0.60	21.4	14.8	55.2	4.4
45	3.1	12.8	9.7	0.76	0.59	21.5	14.8	54.6	5.0
45	3.4	12.8	9.7	0.76	0.59	21.7	14.8	53.7	5.8
55	1.8	12.4	9.6	0.77	0.70	17.7	14.8	71.4	1.8
55	2.2	12.4	9.6	0.77	0.68	18.2	14.7	68.4	2.6
55	2.5	12.4	9.6	0.77	0.67	18.5	14.7	66.8	3.3
55	2.8	12.5	9.6	0.77	0.66	18.8	14.7	65.5	4.0
55	2.9	12.5	9.6	0.77	0.66	18.8	14.7	65.2	4.2
55	3.1	12.5	9.6	0.77	0.66	19.0	14.7	64.5	4.8
55	3.4	12.5	9.6	0.77	0.65	19.2	14.7	63.7	5.6
68	1.8	12.0	9.4	0.79	0.80	14.9	14.7	84.3	1.7
68	2.2	12.0	9.4	0.78	0.78	15.4	14.7	81.3	2.5
68	2.5	12.0	9.4	0.78	0.77	15.7	14.7	79.7	3.1
68	2.8	12.1	9.4	0.78	0.76	15.9	14.6	78.5	3.8
68	2.9	12.1	9.4	0.78	0.76	15.9	14.6	78.1	4.0
68	3.1	12.1	9.4	0.78	0.75	16.0	14.6	77.4	4.5
68	3.4	12.1	9.5	0.78	0.75	16.2	14.6	76.6	5.3
77	1.8	11.7	9.3	0.80	0.88	13.3	14.7	93.3	1.7
77	2.2	11.7	9.3	0.80	0.86	13.6	14.6	90.3	2.4
77	2.5	11.7	9.3	0.80	0.85	13.9	14.6	88.7	3.0
GLHP 77	**2.8**	**11.7**	**9.3**	**0.79**	**0.84**	**14.0**	**14.6**	**87.4**	**3.7**
77	2.9	11.7	9.3	0.79	0.83	14.1	14.6	87.1	3.9
77	3.1	11.8	9.3	0.79	0.83	14.2	14.6	86.4	4.4
77	3.4	11.8	9.3	0.79	0.82	14.3	14.6	85.6	5.2
86	1.8	11.3	9.2	0.81	0.97	11.7	14.6	102.3	1.6
86	2.2	11.4	9.2	0.81	0.95	12.0	14.6	99.3	2.3
86	2.5	11.4	9.2	0.81	0.93	12.2	14.6	97.7	2.9
WLHP 86	**2.8**	**11.4**	**9.2**	**0.81**	**0.92**	**12.4**	**14.5**	**96.4**	**3.6**
86	2.9	11.4	9.2	0.81	0.92	12.4	14.5	96.0	3.8
86	3.1	11.4	9.2	0.81	0.91	12.5	14.5	95.4	4.3
86	3.4	11.4	9.2	0.81	0.91	12.6	14.5	94.5	5.0
95	1.8	11.0	9.0	0.82	1.07	10.2	14.6	111.3	1.6
95	2.2	11.0	9.1	0.82	1.05	10.5	14.6	108.2	2.3
95	2.5	11.0	9.1	0.82	1.03	10.7	14.5	106.6	2.9
95	2.8	11.0	9.1	0.82	1.02	10.8	14.5	105.4	3.5
95	2.9	11.0	9.1	0.82	1.02	10.8	14.5	105.0	3.7
95	3.1	11.0	9.1	0.82	1.01	10.9	14.5	104.3	4.2
95	3.4	11.0	9.1	0.82	1.01	11.0	14.5	103.5	4.9

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Table 31. GEH012 cooling performance (continued)

EWT	GPM	Total Mbtuh	Sen Mbtuh	SHR	Power kW	EER	Reject Mbtuh	LWT	Feet Head
105	1.8	10.5	8.9	0.84	1.21	8.7	14.6	121.3	1.6
105	2.2	10.5	8.9	0.84	1.18	9.0	14.6	118.2	2.2
105	2.5	10.6	8.9	0.84	1.16	9.1	14.5	116.6	2.8
105	2.8	10.6	8.9	0.84	1.15	9.2	14.5	115.3	3.4
105	2.9	10.6	8.9	0.84	1.14	9.2	14.5	115.0	3.6
105	3.1	10.6	8.9	0.84	1.14	9.3	14.5	114.3	4.1
105	3.4	10.6	8.9	0.84	1.13	9.3	14.4	113.5	4.8
110	1.8	10.2	8.8	0.86	1.29	7.9	14.6	126.2	1.5
110	2.2	10.2	8.8	0.86	1.26	8.2	14.5	123.2	2.2
110	2.5	10.3	8.8	0.85	1.24	8.3	14.5	121.6	2.7
110	2.8	10.3	8.8	0.85	1.23	8.4	14.5	120.4	3.3
110	2.9	10.3	8.8	0.85	1.22	8.4	14.5	120.0	3.6
110	3.1	10.3	8.8	0.85	1.22	8.5	14.5	119.3	4.0
110	3.4	10.3	8.8	0.85	1.21	8.5	14.5	118.5	4.7

Notes: Cooling performance data is tabulated at 80.6°F DB/66.2°F WB entering air at ARI/ISO 13256-1 rated cfm. For ARI/ISO 13256-1 certified ratings, see Table 17, p. 27. See Performance correction tables to correct performance at conditions other than those tabulated. Data shown is for unit performance only. Interpolation is permissible. Extrapolation is not. Rated GPM: 2.8 Minimum cfm 304; Rated cfm 380; Maximum cfm 456

Table 32. GEH012 heating performance

EWT	GPM	Htg Cap Mbtuh	Absorb Mbtuh	Power kW	COP	LWT	Feet Head
25	1.8	8.5	5.5	0.87	2.8	18.9	2.8
25	2.2	8.6	5.7	0.87	2.9	19.9	4.0
25	2.5	8.7	5.7	0.88	2.9	20.4	5.0
25	2.8	8.8	5.8	0.88	2.9	20.8	6.1
25	2.9	8.8	5.8	0.88	2.9	21.0	6.5
25	3.1	8.9	5.9	0.88	3.0	21.2	7.3
25	3.4	8.9	5.9	0.88	3.0	21.5	8.5
32	1.8	9.3	6.3	0.89	3.1	25.0	2.7
32	2.2	9.5	6.5	0.89	3.1	26.1	3.9
32	2.5	9.6	6.6	0.89	3.2	26.7	4.8
GLHP 32	**2.8**	**9.7**	**6.7**	**0.89**	**3.2**	**27.2**	**5.9**
32	2.9	9.8	6.7	0.89	3.2	27.4	6.3
32	3.1	9.8	6.7	0.89	3.2	27.6	7.0
32	3.4	9.9	6.8	0.90	3.2	28.0	8.3
45	1.8	11.2	8.0	0.92	3.6	36.1	2.2
45	2.2	11.4	8.3	0.92	3.6	37.5	3.1
45	2.5	11.5	8.4	0.92	3.7	38.3	3.9
45	2.8	11.6	8.5	0.92	3.7	38.9	4.7
45	2.9	11.7	8.5	0.92	3.7	39.1	5.0
45	3.1	11.7	8.6	0.92	3.7	39.5	5.7
45	3.4	11.8	8.7	0.92	3.7	39.9	6.6
55	1.8	12.5	9.3	0.94	3.9	44.6	2.1
55	2.2	12.8	9.6	0.94	4.0	46.3	3.0

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Table 32. GEH012 heating performance (continued)

EWT	GPM	Htg Cap Mbtuh	Absorb Mbtuh	Power kW	COP	LWT	Feet Head
55	2.5	12.9	9.7	0.94	4.0	47.2	3.7
55	2.8	13.1	9.9	0.94	4.1	48.0	4.6
55	2.9	13.2	9.9	0.95	4.1	48.1	4.8
55	3.1	13.2	10.0	0.95	4.1	48.5	5.4
55	3.4	13.3	10.0	0.95	4.1	49.1	6.4
68	1.8	14.3	11.0	0.96	4.4	55.7	2.0
68	2.2	14.6	11.3	0.97	4.4	57.7	2.9
68	2.5	14.8	11.5	0.97	4.5	58.8	3.6
WLHP 68	**2.8**	**15.0**	**11.7**	**0.98**	**4.5**	**59.6**	**4.3**
68	2.9	15.1	11.8	0.98	4.5	59.9	4.6
68	3.1	15.1	11.8	0.97	4.6	60.4	5.2
68	3.4	15.3	11.9	0.98	4.6	61.0	6.1
75	1.8	15.3	12.0	0.98	4.6	61.7	2.0
75	2.2	15.7	12.3	0.98	4.7	63.8	2.8
75	2.5	15.9	12.5	0.99	4.7	65.0	3.5
75	2.8	16.0	12.7	0.99	4.7	66.0	4.2
75	2.9	16.1	12.8	0.99	4.8	66.2	4.5
75	3.1	16.2	12.8	0.99	4.8	66.7	5.1
75	3.4	16.4	13.0	1.00	4.8	67.4	5.9
86	1.8	16.8	13.4	1.01	4.9	71.1	1.9
86	2.2	17.2	13.8	1.01	5.0	73.5	2.7
86	2.5	17.4	14.0	1.02	5.0	74.8	3.4
86	2.8	17.7	14.2	1.02	5.1	75.9	4.1
86	2.9	17.7	14.3	1.02	5.1	76.2	4.4
86	3.1	17.8	14.3	1.02	5.1	76.8	4.9
86	3.4	17.9	14.4	1.02	5.1	77.5	5.7

Notes: Heating performance data is tabulated at 68°F DB entering air at ARI/ISO 13256-1 rated cfm. For ARI/ISO 13256-1 certified ratings, see Table 17, p. 27. See Performance correction tables to correct performance at conditions other than those tabulated. Data shown is for unit performance only. Interpolation is permissible. Extrapolation is not. Rated GPM: 2.8 Minimum cfm 304; Rated cfm 380; Maximum cfm 456

Table 33. GEH012 fan correction factors

Entering cfm	Cooling Capacity	Sensible Capacity	Cooling Input Watts	Heating Capacity	Heating Input Watts
304	0.959	0.874	1.005	0.987	1.094
323	0.970	0.906	1.003	0.989	1.065
342	0.981	0.937	1.002	0.996	1.041
361	0.991	0.969	1.001	0.994	1.016
380	1.000	1.000	1.000	1.000	1.000
418	1.017	1.062	0.999	1.002	0.964
437	1.024	1.091	0.998	1.006	0.952
456	1.031	1.121	0.997	1.004	0.937

Table 34. GEV012 cooling performance

EWT	GPM	Total Mbtuh	Sen Mbtuh	SHR	Power kW	EER	Reject Mbtuh	LWT	Feet Head
45	1.8	12.4	9.5	0.77	0.61	20.3	14.5	61.1	1.9
45	2.2	12.4	9.5	0.77	0.59	20.9	14.4	58.1	2.7
45	2.5	12.5	9.5	0.77	0.59	21.3	14.5	56.6	3.4
45	2.8	12.5	9.6	0.77	0.58	21.6	14.4	55.3	4.2
45	2.9	12.5	9.6	0.77	0.57	21.7	14.4	55.0	4.5
45	3.1	12.5	9.6	0.77	0.57	21.9	14.4	54.3	5.0
45	3.4	12.5	9.6	0.76	0.57	22.1	14.4	53.5	5.9
55	1.8	12.3	9.5	0.77	0.71	17.3	14.7	71.4	1.9
55	2.2	12.4	9.6	0.77	0.69	17.9	14.7	68.4	2.6
55	2.5	12.4	9.6	0.77	0.68	18.2	14.7	66.8	3.3
55	2.8	12.4	9.6	0.77	0.67	18.5	14.7	65.5	4.1
55	2.9	12.4	9.6	0.77	0.67	18.5	14.7	65.1	4.3
55	3.1	12.4	9.6	0.77	0.67	18.7	14.7	64.5	4.9
55	3.4	12.4	9.6	0.77	0.66	18.8	14.7	63.7	5.7
68	1.8	11.9	9.4	0.79	0.81	14.8	14.6	84.3	1.8
68	2.2	11.9	9.4	0.79	0.79	15.2	14.6	81.3	2.5
68	2.5	12.0	9.4	0.79	0.77	15.4	14.6	79.7	3.2
68	2.8	12.0	9.4	0.79	0.77	15.6	14.6	78.4	3.9
68	2.9	12.0	9.4	0.79	0.76	15.7	14.6	78.1	4.1
68	3.1	12.0	9.4	0.79	0.76	15.8	14.6	77.4	4.6
68	3.4	12.0	9.4	0.78	0.75	15.9	14.6	76.6	5.4
77	1.8	11.6	9.3	0.80	0.88	13.1	14.6	93.2	1.7
77	2.2	11.6	9.3	0.80	0.86	13.5	14.5	90.2	2.4
77	2.5	11.6	9.3	0.80	0.85	13.7	14.5	88.6	3.1
GLHP 77	**2.8**	**11.6**	**9.3**	**0.80**	**0.84**	**13.9**	**14.5**	**87.4**	**3.8**
77	2.9	11.6	9.3	0.80	0.84	13.9	14.5	87.0	4.0
77	3.1	11.7	9.3	0.80	0.83	14.0	14.5	86.4	4.5
77	3.4	11.7	9.3	0.80	0.83	14.1	14.5	85.5	5.3
86	1.8	11.2	9.1	0.81	0.97	11.6	14.5	102.1	1.7
86	2.2	11.3	9.1	0.81	0.94	11.9	14.5	99.2	2.4
86	2.5	11.3	9.1	0.81	0.93	12.1	14.4	97.6	3.0
WLHP 86	**2.8**	**11.3**	**9.2**	**0.81**	**0.92**	**12.3**	**14.4**	**96.3**	**3.6**
86	2.9	11.3	9.2	0.81	0.92	12.3	14.4	95.9	3.9
86	3.1	11.3	9.2	0.81	0.91	12.4	14.4	95.3	4.4
86	3.4	11.3	9.2	0.81	0.91	12.5	14.4	94.5	5.1
95	1.8	10.8	9.0	0.83	1.06	10.1	14.4	111.0	1.6
95	2.2	10.9	9.0	0.83	1.04	10.5	14.4	108.1	2.3
95	2.5	10.8	9.0	0.83	1.02	10.6	14.3	106.4	2.9
95	2.8	10.8	9.0	0.83	1.02	10.7	14.3	105.2	3.6
95	2.9	10.9	9.0	0.83	1.01	10.8	14.4	104.9	3.8
95	3.1	10.9	9.0	0.83	1.00	10.9	14.3	104.2	4.3
95	3.4	10.9	9.0	0.83	1.00	11.0	14.3	103.4	5.0

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Table 34. GEV012 cooling performance (continued)

EWT	GPM	Total Mbtuh	Sen Mbtuh	SHR	Power kW	EER	Reject Mbtuh	LWT	Feet Head
105	1.8	10.7	9.0	0.82	1.21	8.8	14.8	121.5	1.6
105	2.2	10.8	9.0	0.82	1.17	9.2	14.8	118.4	2.3
105	2.5	10.7	9.0	0.82	1.14	9.3	14.6	116.7	2.8
105	2.8	10.7	9.0	0.82	1.12	9.5	14.5	115.4	3.5
105	2.9	10.7	9.0	0.82	1.12	9.6	14.5	115.0	3.7
105	3.1	10.7	9.0	0.82	1.10	9.7	14.5	114.3	4.2
105	3.4	10.7	9.0	0.82	1.10	9.8	14.5	113.5	4.9
110	1.8	10.3	8.8	0.83	1.25	8.3	14.6	126.2	1.6
110	2.2	10.4	8.9	0.82	1.21	8.6	14.5	123.2	2.2
110	2.5	10.3	8.8	0.83	1.19	8.7	14.4	121.5	2.8
110	2.8	10.3	8.8	0.83	1.17	8.8	14.3	120.2	3.4
110	2.9	10.4	8.8	0.83	1.16	8.9	14.3	119.9	3.7
110	3.1	10.4	8.8	0.83	1.15	9.0	14.3	119.2	4.1
110	3.4	10.4	8.8	0.83	1.14	9.1	14.3	118.4	4.9

Notes: Cooling performance data is tabulated at 80.6°F DB/66.2°F WB entering air at ARI/ISO 13256-1 rated cfm. For ARI/ISO 13256-1 certified ratings, see Table 18, p. 27. See Performance correction tables to correct performance at conditions other than those tabulated. Data shown is for unit performance only. Interpolation is permissible. Extrapolation is not. Rated GPM: 2.8 Minimum cfm 304; Rated cfm 380; Maximum cfm 456

Table 35. GEV012 heating performance

EWT	GPM	Htg Cap Mbtuh	Absorb Mbtuh	Power kW	COP	LWT	Feet Head
25	1.8	8.7	5.7	0.88	2.9	18.7	2.8
25	2.2	8.9	5.9	0.88	2.9	19.7	3.9
25	2.5	8.9	5.9	0.88	3.0	20.3	4.9
25	2.8	9.0	6.0	0.88	3.0	20.7	6.0
25	2.9	9.0	6.0	0.88	3.0	20.8	6.4
25	3.1	9.1	6.1	0.89	3.0	21.1	7.1
25	3.4	9.2	6.1	0.89	3.0	21.4	8.4
32	1.8	9.6	6.5	0.89	3.1	24.8	2.7
32	2.2	9.7	6.7	0.90	3.2	25.9	3.8
32	2.5	9.8	6.8	0.90	3.2	26.6	4.8
GLHP 32	**2.8**	**9.9**	**6.9**	**0.90**	**3.2**	**27.1**	**5.8**
32	2.9	10.0	6.9	0.90	3.2	27.2	6.2
32	3.1	10.0	6.9	0.90	3.3	27.5	6.9
32	3.4	10.1	7.0	0.90	3.3	27.9	8.1
45	1.8	11.4	8.2	0.92	3.6	35.9	2.2
45	2.2	11.6	8.4	0.92	3.7	37.3	3.1
45	2.5	11.7	8.6	0.92	3.7	38.1	3.8
45	2.8	11.8	8.7	0.93	3.7	38.8	4.7
45	2.9	11.8	8.7	0.93	3.7	39.0	5.0
45	3.1	11.9	8.7	0.93	3.8	39.4	5.6
45	3.4	12.0	8.8	0.93	3.8	39.8	6.5
55	1.8	12.7	9.5	0.94	4.0	44.4	2.1
55	2.2	13.0	9.8	0.94	4.0	46.1	3.0

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Table 35. GEV012 heating performance (continued)

EWT	GPM	Htg Cap Mbtuh	Absorb Mbtuh	Power kW	COP	LWT	Feet Head
55	2.5	13.1	9.9	0.95	4.1	47.1	3.7
55	2.8	13.2	10.0	0.95	4.1	47.8	4.5
55	2.9	13.3	10.1	0.95	4.1	48.0	4.8
55	3.1	13.4	10.2	0.95	4.1	48.4	5.4
55	3.4	13.4	10.2	0.95	4.1	49.0	6.3
68	1.8	14.5	11.2	0.97	4.4	55.6	2.0
68	2.2	14.8	11.5	0.97	4.5	57.5	2.8
68	2.5	15.0	11.7	0.98	4.5	58.6	3.5
WLHP 68	**2.8**	**15.2**	**11.8**	**0.98**	**4.6**	**59.5**	**4.3**
68	2.9	15.2	11.9	0.98	4.6	59.8	4.6
68	3.1	15.3	12.0	0.98	4.6	60.3	5.1
68	3.4	15.4	12.0	0.98	4.6	60.9	6.0
75	1.8	15.5	12.1	0.98	4.6	61.5	1.9
75	2.2	15.9	12.5	0.99	4.7	63.6	2.8
75	2.5	16.1	12.7	0.99	4.8	64.8	3.4
75	2.8	16.2	12.8	0.99	4.8	65.8	4.2
75	2.9	16.3	12.9	0.99	4.8	66.1	4.4
75	3.1	16.4	13.0	1.00	4.8	66.6	5.0
75	3.4	16.5	13.1	1.00	4.8	67.3	5.9
86	1.8	17.0	13.6	1.01	4.9	70.9	1.9
86	2.2	17.4	14.0	1.02	5.0	73.3	2.7
86	2.5	17.6	14.2	1.02	5.1	74.7	3.3
86	2.8	17.8	14.3	1.02	5.1	75.8	4.0
86	2.9	17.9	14.4	1.02	5.1	76.1	4.3
86	3.1	18.0	14.5	1.03	5.1	76.7	4.8
86	3.4	18.1	14.6	1.03	5.2	77.4	5.7

Notes: Heating performance data is tabulated at 68°F DB entering air at ARI/ISO 13256-1 rated cfm. For ARI/ISO 13256-1 certified ratings, see Table 18, p. 27. See Performance correction tables to correct performance at conditions other than those tabulated. Data shown is for unit performance only. Interpolation is permissible. Extrapolation is not. Rated GPM: 2.8 Minimum cfm 304; Rated cfm 380; Maximum cfm 456

Table 36. GEV012 fan correction factors

Entering cfm	Cooling Capacity	Sensible Capacity	Cooling Input Watts	Heating Capacity	Heating Input Watts
304	0.958	0.872	1.005	0.987	1.094
323	0.969	0.904	1.003	0.990	1.065
342	0.980	0.936	1.002	0.993	1.041
361	0.990	0.968	1.001	0.998	1.021
380	1.000	1.000	1.000	1.000	1.000
418	1.017	1.063	0.998	1.003	0.968
437	1.025	1.093	0.997	1.004	0.954
456	1.032	1.124	0.997	1.008	0.944

Table 37. GEH015 cooling performance

EWT	GPM	Total Mbtuh	Sen Mbtuh	SHR	Power kW	EER	Reject Mbtuh	LWT	Feet Head
45	2.2	15.5	11.7	0.76	0.71	21.8	17.9	61.3	2.5
45	2.8	15.6	11.8	0.76	0.68	23.1	17.9	57.8	3.8
45	3.1	15.6	11.8	0.75	0.66	23.6	17.9	56.5	4.6
45	3.5	15.6	11.8	0.75	0.65	24.2	17.9	55.2	5.7
45	3.6	15.7	11.8	0.75	0.64	24.3	17.9	54.9	6.0
45	3.8	15.7	11.8	0.75	0.64	24.5	17.8	54.4	6.6
45	4.2	15.7	11.8	0.75	0.63	25.0	17.8	53.5	7.9
55	2.2	15.2	11.6	0.76	0.83	18.4	18.0	71.4	2.4
55	2.8	15.3	11.7	0.76	0.79	19.4	18.0	67.9	3.7
55	3.1	15.3	11.7	0.76	0.78	19.7	18.0	66.6	4.4
55	3.5	15.4	11.7	0.76	0.76	20.1	18.0	65.3	5.5
55	3.6	15.4	11.7	0.76	0.76	20.2	18.0	65.0	5.8
55	3.8	15.4	11.7	0.76	0.75	20.4	17.9	64.4	6.3
55	4.2	15.4	11.7	0.76	0.75	20.6	17.9	63.5	7.6
68	2.2	14.7	11.5	0.78	0.97	15.2	18.1	84.4	2.3
68	2.8	14.8	11.5	0.78	0.94	15.8	18.0	80.9	3.5
68	3.1	14.9	11.5	0.77	0.92	16.1	18.0	79.6	4.2
68	3.5	14.9	11.5	0.77	0.91	16.3	18.0	78.3	5.2
68	3.6	14.9	11.5	0.77	0.91	16.4	18.0	78.0	5.5
68	3.8	14.9	11.5	0.77	0.90	16.5	18.0	77.5	6.0
68	4.2	14.9	11.5	0.77	0.89	16.7	18.0	76.6	7.2
77	2.2	14.4	11.3	0.79	1.08	13.4	18.1	93.4	2.2
77	2.8	14.4	11.4	0.79	1.04	13.9	18.0	89.9	3.4
77	3.1	14.5	11.4	0.79	1.03	14.0	18.0	88.6	4.1
GLHP 77	**3.5**	**14.5**	**11.4**	**0.78**	**1.02**	**14.2**	**18.0**	**87.3**	**5.1**
77	3.6	14.5	11.4	0.78	1.01	14.3	18.0	87.0	5.3
77	3.8	14.5	11.4	0.78	1.01	14.4	18.0	86.4	5.9
77	4.2	14.5	11.4	0.78	1.00	14.5	17.9	85.5	7.0
86	2.2	14.0	11.2	0.80	1.19	11.7	18.0	102.4	2.2
86	2.8	14.0	11.2	0.80	1.15	12.2	18.0	98.8	3.3
86	3.1	14.0	11.2	0.80	1.14	12.3	17.9	97.6	4.0
WLHP 86	**3.5**	**14.1**	**11.2**	**0.80**	**1.13**	**12.5**	**17.9**	**96.2**	**4.9**
86	3.6	14.1	11.2	0.80	1.12	12.5	17.9	95.9	5.2
86	3.8	14.1	11.2	0.80	1.12	12.6	17.9	95.4	5.7
86	4.2	14.1	11.2	0.80	1.11	12.7	17.9	94.5	6.8
95	2.2	13.6	11.0	0.81	1.31	10.3	18.0	111.4	2.1
95	2.8	13.6	11.0	0.81	1.28	10.7	18.0	107.8	3.2
95	3.1	13.6	11.0	0.81	1.26	10.8	17.9	106.6	3.9
95	3.5	13.6	11.0	0.81	1.25	10.9	17.9	105.2	4.8
95	3.6	13.6	11.0	0.81	1.25	10.9	17.9	104.9	5.0
95	3.8	13.6	11.0	0.81	1.24	11.0	17.9	104.4	5.5
95	4.2	13.6	11.0	0.81	1.23	11.1	17.8	103.5	6.6

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Table 37. GEH015 cooling performance (continued)

EWT	GPM	Total Mbtuh	Sen Mbtuh	SHR	Power kW	EER	Reject Mbtuh	LWT	Feet Head
105	2.2	13.1	10.8	0.83	1.47	8.9	18.1	121.5	2.1
105	2.8	13.1	10.8	0.83	1.43	9.2	18.0	117.8	3.1
105	3.1	13.1	10.8	0.83	1.42	9.3	17.9	116.6	3.8
105	3.5	13.1	10.8	0.83	1.40	9.4	17.9	115.2	4.7
105	3.6	13.1	10.8	0.83	1.40	9.4	17.9	114.9	4.9
105	3.8	13.1	10.8	0.83	1.39	9.4	17.9	114.4	5.4
105	4.2	13.1	10.8	0.83	1.38	9.5	17.8	113.5	6.4
110	2.2	12.8	10.7	0.84	1.57	8.2	18.2	126.5	2.0
110	2.8	12.8	10.7	0.84	1.52	8.4	18.0	122.9	3.1
110	3.1	12.8	10.7	0.84	1.51	8.5	18.0	121.6	3.7
110	3.5	12.8	10.7	0.84	1.49	8.6	17.9	120.2	4.6
110	3.6	12.8	10.7	0.84	1.49	8.6	17.9	120.0	4.8
110	3.8	12.8	10.7	0.84	1.48	8.7	17.9	119.4	5.3
110	4.2	12.8	10.7	0.84	1.47	8.7	17.9	118.5	6.3

Notes: Cooling performance data is tabulated at 80.6°F DB/66.2°F WB entering air at ARI/ISO 13256-1 rated cfm. For ARI/ISO 13256-1 certified ratings, see Table 17, p. 27. See Performance correction tables to correct performance at conditions other than those tabulated. Data shown is for unit performance only. Interpolation is permissible. Extrapolation is not. Rated GPM: 3.5 Minimum cfm 380; Rated cfm 475; Maximum cfm 570

Table 38. GEH015 heating performance

EWT	GPM	Htg Cap Mbtuh	Absorb Mbtuh	Power kW	COP	LWT	Feet Head
25	2.2	10.7	7.0	1.07	2.9	18.6	3.9
25	2.8	10.9	7.3	1.07	3.0	19.8	5.9
25	3.1	11.0	7.3	1.07	3.0	20.3	7.1
25	3.5	11.1	7.4	1.08	3.0	20.7	8.7
25	3.6	11.1	7.5	1.08	3.0	20.9	9.2
25	3.8	11.2	7.5	1.08	3.0	21.1	10.1
25	4.2	11.3	7.6	1.08	3.1	21.4	12.0
32	2.2	11.7	8.0	1.09	3.1	24.7	3.8
32	2.8	12.0	8.3	1.10	3.2	26.1	5.7
32	3.1	12.1	8.3	1.10	3.2	26.6	6.9
GLHP 32	**3.5**	**12.2**	**8.5**	**1.10**	**3.3**	**27.2**	**8.5**
32	3.6	12.2	8.5	1.10	3.3	27.3	8.9
32	3.8	12.3	8.5	1.10	3.3	27.5	9.8
32	4.2	12.4	8.6	1.10	3.3	27.9	11.6
45	2.2	13.9	10.0	1.14	3.6	35.9	3.0
45	2.8	14.3	10.4	1.14	3.7	37.6	4.6
45	3.1	14.4	10.5	1.15	3.7	38.2	5.5
45	3.5	14.6	10.6	1.15	3.7	38.9	6.8
45	3.6	14.6	10.6	1.15	3.7	39.1	7.2
45	3.8	14.6	10.7	1.15	3.7	39.4	7.9
45	4.2	14.7	10.8	1.15	3.7	39.9	9.4
55	2.2	15.6	11.6	1.17	3.9	44.4	2.9
55	2.8	16.1	12.0	1.18	4.0	46.4	4.4

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Table 38. GEH015 heating performance (continued)

EWT	GPM	Htg Cap Mbtuh	Absorb Mbtuh	Power kW	COP	LWT	Feet Head
55	3.1	16.2	12.2	1.19	4.0	47.1	5.3
55	3.5	16.4	12.3	1.19	4.0	47.9	6.6
55	3.6	16.4	12.3	1.19	4.0	48.1	6.9
55	3.8	16.5	12.4	1.19	4.1	48.5	7.6
55	4.2	16.6	12.5	1.19	4.1	49.0	9.0
68	2.2	17.9	13.7	1.22	4.3	55.5	2.8
68	2.8	18.4	14.2	1.23	4.4	57.8	4.2
68	3.1	18.6	14.4	1.23	4.4	58.7	5.1
WLHP 68	**3.5**	**18.8**	**14.6**	**1.24**	**4.5**	**59.6**	**6.2**
68	3.6	18.9	14.7	1.24	4.5	59.9	6.6
68	3.8	19.0	14.8	1.24	4.5	60.2	7.2
68	4.2	19.1	14.9	1.24	4.5	60.9	8.6
75	2.2	19.2	14.9	1.24	4.5	61.4	2.7
75	2.8	19.7	15.4	1.25	4.6	64.0	4.1
75	3.1	19.9	15.7	1.25	4.7	64.9	4.9
75	3.5	20.2	15.9	1.26	4.7	65.9	6.1
75	3.6	20.2	15.9	1.26	4.7	66.2	6.4
75	3.8	20.3	16.0	1.26	4.7	66.6	7.0
75	4.2	20.5	16.2	1.26	4.8	67.3	8.4
86	2.2	21.1	16.8	1.27	4.9	70.8	2.6
86	2.8	21.7	17.4	1.28	5.0	73.6	4.0
86	3.1	21.9	17.6	1.28	5.0	74.7	4.8
86	3.5	22.2	17.8	1.29	5.1	75.8	5.9
86	3.6	22.2	17.8	1.28	5.1	76.1	6.2
86	3.8	22.3	18.0	1.29	5.1	76.5	6.8
86	4.2	22.5	18.1	1.29	5.1	77.4	8.1

Notes: Heating performance data is tabulated at 68°F DB entering air at ARI/ISO 13256-1 rated cfm. For ARI/ISO 13256-1 certified ratings, see Table 17, p. 27. See Performance correction tables to correct performance at conditions other than those tabulated. Data shown is for unit performance only. Interpolation is permissible. Extrapolation is not. Rated GPM: 3.5 Minimum cfm 380; Rated cfm 475; Maximum cfm 570

Table 39. GEH015 fan correction factors

Entering cfm	Cooling Capacity	Sensible Capacity	Cooling Input Watts	Heating Capacity	Heating Input Watts
380	0.960	0.878	1.005	0.993	1.100
404	0.970	0.907	1.004	0.991	1.067
428	0.981	0.939	1.002	0.998	1.045
451	0.991	0.969	1.001	0.996	1.017
475	1.000	1.000	1.000	1.000	1.000
523	1.017	1.059	0.998	1.000	0.963
546	1.024	1.088	0.997	1.000	0.948
570	1.031	1.117	0.996	1.002	0.932

Table 40. GEV015 cooling performance

EWT	GPM	Total Mbtuh	Sen Mbtuh	SHR	Power kW	EER	Reject Mbtuh	LWT	Feet Head
45	2.2	15.5	11.9	0.77	0.70	22.1	17.9	61.3	2.6
45	2.8	15.6	11.9	0.77	0.66	23.5	17.8	57.7	4.1
45	3.1	15.6	11.9	0.76	0.65	24.0	17.8	56.5	4.9
45	3.5	15.7	12.0	0.76	0.64	24.6	17.9	55.2	6.0
45	3.6	15.7	12.0	0.76	0.63	24.8	17.8	54.9	6.3
45	3.8	15.7	12.0	0.76	0.63	25.0	17.9	54.4	7.0
45	4.2	15.7	12.0	0.76	0.62	25.5	17.8	53.5	8.3
55	2.2	15.2	11.8	0.77	0.82	18.7	18.0	71.4	2.5
55	2.8	15.3	11.8	0.77	0.78	19.6	18.0	67.8	3.9
55	3.1	15.3	11.8	0.77	0.77	20.0	17.9	66.6	4.7
55	3.5	15.4	11.8	0.77	0.75	20.4	17.9	65.2	5.8
55	3.6	15.4	11.8	0.77	0.75	20.5	17.9	65.0	6.1
55	3.8	15.4	11.8	0.77	0.74	20.7	17.9	64.4	6.7
55	4.2	15.4	11.8	0.77	0.73	21.0	17.9	63.5	8.0
68	2.2	14.8	11.6	0.79	0.96	15.4	18.1	84.4	2.4
68	2.8	14.8	11.6	0.78	0.93	16.0	18.0	80.9	3.7
68	3.1	14.9	11.6	0.78	0.91	16.3	18.0	79.6	4.5
68	3.5	14.9	11.7	0.78	0.90	16.5	18.0	78.3	5.5
68	3.6	14.9	11.7	0.78	0.90	16.6	18.0	78.0	5.8
68	3.8	14.9	11.7	0.78	0.89	16.7	18.0	77.5	6.4
68	4.2	14.9	11.7	0.78	0.88	16.9	18.0	76.5	7.6
77	2.2	14.4	11.5	0.80	1.07	13.5	18.1	93.4	2.4
77	2.8	14.5	11.5	0.79	1.03	14.0	18.0	89.9	3.6
77	3.1	14.5	11.5	0.79	1.02	14.2	18.0	88.6	4.3
GLHP 77	**3.5**	**14.5**	**11.5**	**0.79**	**1.01**	**14.4**	**18.0**	**87.3**	**5.4**
77	3.6	14.5	11.5	0.79	1.01	14.4	18.0	87.0	5.6
77	3.8	14.5	11.5	0.79	1.00	14.5	18.0	86.5	6.2
77	4.2	14.6	11.5	0.79	0.99	14.7	17.9	85.5	7.4
86	2.2	14.0	11.3	0.81	1.18	11.9	18.1	102.4	2.3
86	2.8	14.1	11.3	0.81	1.15	12.3	18.0	98.9	3.5
86	3.1	14.1	11.3	0.80	1.13	12.4	18.0	97.6	4.2
WLHP 86	**3.5**	**14.1**	**11.4**	**0.80**	**1.12**	**12.6**	**17.9**	**96.3**	**5.2**
86	3.6	14.1	11.4	0.80	1.12	12.7	17.9	96.0	5.5
86	3.8	14.1	11.4	0.80	1.11	12.7	17.9	95.4	6.0
86	4.2	14.2	11.4	0.80	1.10	12.9	17.9	94.5	7.2
95	2.2	13.6	11.2	0.82	1.31	10.4	18.1	111.4	2.2
95	2.8	13.7	11.2	0.82	1.27	10.8	18.0	107.9	3.4
95	3.1	13.7	11.2	0.82	1.26	10.9	18.0	106.6	4.1
95	3.5	13.7	11.2	0.82	1.24	11.0	17.9	105.2	5.1
95	3.6	13.7	11.2	0.82	1.24	11.1	17.9	105.0	5.3
95	3.8	13.7	11.2	0.82	1.23	11.1	17.9	104.4	5.9
95	4.2	13.7	11.2	0.82	1.22	11.2	17.9	103.5	7.0

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Table 40. GEV015 cooling performance (continued)

EWT	GPM	Total Mbtuh	Sen Mbtuh	SHR	Power kW	EER	Reject Mbtuh	LWT	Feet Head
105	2.2	13.2	11.0	0.84	1.46	9.0	18.1	121.5	2.2
105	2.8	13.2	11.0	0.83	1.42	9.3	18.0	117.9	3.3
105	3.1	13.2	11.0	0.83	1.41	9.4	18.0	116.6	4.0
105	3.5	13.2	11.0	0.83	1.39	9.5	17.9	115.3	4.9
105	3.6	13.2	11.0	0.83	1.39	9.5	17.9	115.0	5.2
105	3.8	13.2	11.0	0.83	1.38	9.6	17.9	114.4	5.7
105	4.2	13.2	11.0	0.83	1.37	9.6	17.9	113.5	6.8
110	2.2	12.9	10.9	0.84	1.55	8.3	18.2	126.6	2.1
110	2.8	12.9	10.9	0.84	1.51	8.6	18.1	122.9	3.3
110	3.1	12.9	10.9	0.84	1.49	8.7	18.0	121.6	3.9
110	3.5	12.9	10.9	0.84	1.48	8.8	18.0	120.3	4.9
110	3.6	12.9	10.9	0.84	1.47	8.8	18.0	120.0	5.1
110	3.8	12.9	10.9	0.84	1.47	8.8	18.0	119.5	5.6
110	4.2	13.0	10.9	0.84	1.46	8.9	17.9	118.5	6.7

Notes: Cooling performance data is tabulated at 80.6°F DB/66.2°F WB entering air at ARI/ISO 13256-1 rated cfm. For ARI/ISO 13256-1 certified ratings, see Table 18, p. 27. See Performance correction tables to correct performance at conditions other than those tabulated. Data shown is for unit performance only. Interpolation is permissible. Extrapolation is not. Rated GPM: 3.5 Minimum cfm 380; Rated cfm 475; Maximum cfm 570

Table 41. GEV015 heating performance

EWT	GPM	Htg Cap Mbtuh	Absorb Mbtuh	Power kW	COP	LWT	Feet Head
25	2.2	10.8	7.2	1.05	3.0	18.5	3.6
25	2.8	11.0	7.4	1.06	3.0	19.7	5.5
25	3.1	11.0	7.4	1.06	3.1	20.2	6.5
25	3.5	11.2	7.5	1.06	3.1	20.7	8.1
25	3.6	11.2	7.6	1.06	3.1	20.8	8.5
25	3.8	11.2	7.6	1.06	3.1	21.0	9.3
25	4.2	11.3	7.7	1.06	3.1	21.4	11.1
32	2.2	11.7	8.1	1.07	3.2	24.7	3.5
32	2.8	12.0	8.3	1.08	3.3	26.1	5.3
32	3.1	12.1	8.4	1.08	3.3	26.6	6.3
GLHP 32	**3.5**	**12.2**	**8.5**	**1.08**	**3.3**	**27.1**	**7.8**
32	3.6	12.2	8.5	1.08	3.3	27.3	8.2
32	3.8	12.3	8.6	1.09	3.3	27.5	9.0
32	4.2	12.4	8.7	1.09	3.3	27.9	10.7
45	2.2	14.0	10.1	1.12	3.7	35.8	2.8
45	2.8	14.2	10.4	1.12	3.7	37.6	4.3
45	3.1	14.3	10.5	1.12	3.7	38.2	5.1
45	3.5	14.5	10.6	1.13	3.8	38.9	6.3
45	3.6	14.5	10.7	1.13	3.8	39.1	6.6
45	3.8	14.6	10.8	1.13	3.8	39.3	7.3
45	4.2	14.6	10.8	1.13	3.8	39.9	8.6
55	2.2	15.6	11.6	1.15	4.0	44.4	2.7
55	2.8	16.0	12.0	1.16	4.0	46.4	4.1

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Table 41. GEV015 heating performance (continued)

EWT	GPM	Htg Cap Mbtuh	Absorb Mbtuh	Power kW	COP	LWT	Feet Head
55	3.1	16.1	12.1	1.16	4.1	47.2	4.9
55	3.5	16.3	12.3	1.16	4.1	48.0	6.1
55	3.6	16.3	12.3	1.16	4.1	48.2	6.4
55	3.8	16.4	12.4	1.16	4.1	48.5	7.0
55	4.2	16.5	12.5	1.17	4.1	49.1	8.3
68	2.2	17.8	13.8	1.19	4.4	55.5	2.6
68	2.8	18.2	14.2	1.19	4.5	57.9	3.9
68	3.1	18.4	14.3	1.20	4.5	58.7	4.7
WLHP 68	**3.5**	**18.5**	**14.5**	**1.20**	**4.5**	**59.7**	**5.8**
68	3.6	18.6	14.5	1.20	4.5	59.9	6.1
68	3.8	18.7	14.6	1.20	4.6	60.3	6.7
68	4.2	18.8	14.7	1.20	4.6	61.0	7.9
75	2.2	19.0	14.9	1.21	4.6	61.5	2.5
75	2.8	19.5	15.4	1.21	4.7	64.0	3.8
75	3.1	19.7	15.5	1.22	4.7	65.0	4.6
75	3.5	19.8	15.7	1.22	4.8	66.0	5.6
75	3.6	19.9	15.7	1.22	4.8	66.3	5.9
75	3.8	20.0	15.8	1.22	4.8	66.7	6.5
75	4.2	20.1	15.9	1.22	4.8	67.4	7.7
86	2.2	20.9	16.7	1.23	5.0	70.8	2.4
86	2.8	21.4	17.2	1.24	5.1	73.7	3.7
86	3.1	21.6	17.4	1.24	5.1	74.8	4.4
86	3.5	21.8	17.6	1.24	5.2	75.9	5.4
86	3.6	21.9	17.7	1.24	5.2	76.2	5.7
86	3.8	21.9	17.7	1.24	5.2	76.7	6.3
86	4.2	22.1	17.8	1.24	5.2	77.5	7.5

Notes: Heating performance data is tabulated at 68°F DB entering air at ARI/ISO 13256-1 rated cfm. For ARI/ISO 13256-1 certified ratings, see Table 18, p. 27. See Performance correction tables to correct performance at conditions other than those tabulated. Data shown is for unit performance only. Interpolation is permissible. Extrapolation is not. Rated GPM: 3.5 Minimum cfm 380; Rated cfm 475; Maximum cfm 570

Table 42. GEV015 fan correction factors

Entering cfm	Cooling Capacity	Sensible Capacity	Cooling Input Watts	Heating Capacity	Heating Input Watts
380	0.958	0.873	1.007	0.992	1.100
404	0.970	0.905	1.005	0.998	1.073
428	0.981	0.938	1.003	1.001	1.048
451	0.991	0.969	1.002	0.999	1.020
475	1.000	1.000	1.000	1.000	1.000
523	1.017	1.062	0.997	1.007	0.968
546	1.024	1.092	0.996	1.006	0.953
570	1.031	1.122	0.995	1.009	0.940

Table 43. GEH018 cooling performance

EWT	GPM	Total Mbtuh	Sen Mbtuh	SHR	Power kW	EER	Reject Mbtuh	LWT	Feet Head
45	2.7	18.8	14.4	0.77	0.93	20.2	22.0	61.3	3.4
45	3.3	18.8	14.4	0.77	0.90	20.9	21.9	58.3	4.8
45	3.7	18.8	14.4	0.76	0.89	21.3	21.9	56.8	5.9
45	4.2	18.8	14.4	0.76	0.87	21.7	21.8	55.4	7.4
45	4.4	18.8	14.3	0.76	0.86	21.8	21.8	54.9	8.1
45	4.6	18.8	14.4	0.76	0.86	21.9	21.8	54.5	8.7
45	5.0	18.8	14.3	0.76	0.85	22.1	21.7	53.7	10.1
55	2.7	18.7	14.3	0.77	1.05	17.8	22.3	71.5	3.3
55	3.3	18.7	14.3	0.77	1.02	18.4	22.2	68.4	4.6
55	3.7	18.7	14.4	0.77	1.00	18.7	22.1	67.0	5.7
55	4.2	18.7	14.3	0.77	0.99	19.0	22.1	65.5	7.1
55	4.4	18.7	14.4	0.77	0.98	19.1	22.1	65.0	7.7
55	4.6	18.8	14.4	0.76	0.98	19.2	22.1	64.6	8.4
55	5.0	18.8	14.4	0.76	0.97	19.4	22.1	63.8	9.7
68	2.7	18.3	14.2	0.77	1.23	15.0	22.5	84.7	3.1
68	3.3	18.4	14.2	0.77	1.19	15.5	22.5	81.6	4.4
68	3.7	18.4	14.2	0.77	1.17	15.7	22.4	80.1	5.4
68	4.2	18.5	14.3	0.77	1.16	16.0	22.4	78.7	6.8
68	4.4	18.5	14.3	0.77	1.15	16.0	22.4	78.2	7.4
68	4.6	18.5	14.3	0.77	1.15	16.1	22.4	77.7	8.0
68	5.0	18.5	14.3	0.77	1.14	16.3	22.4	77.0	9.3
77	2.7	17.9	14.1	0.78	1.35	13.3	22.6	93.7	3.0
77	3.3	18.0	14.1	0.78	1.32	13.7	22.5	90.6	4.3
77	3.7	18.1	14.1	0.78	1.30	13.9	22.5	89.2	5.3
GLHP 77	**4.2**	**18.1**	**14.1**	**0.78**	**1.28**	**14.1**	**22.5**	**87.7**	**6.6**
77	4.4	18.1	14.1	0.78	1.28	14.2	22.5	87.2	7.2
77	4.6	18.1	14.1	0.78	1.27	14.3	22.4	86.8	7.7
77	5.0	18.1	14.1	0.78	1.26	14.4	22.4	86.0	9.0
86	2.7	17.4	13.8	0.79	1.50	11.6	22.5	102.7	2.9
86	3.3	17.5	13.9	0.79	1.45	12.0	22.5	99.6	4.2
86	3.7	17.6	13.9	0.79	1.44	12.2	22.5	98.1	5.1
WLHP 86	**4.2**	**17.6**	**13.9**	**0.79**	**1.42**	**12.4**	**22.4**	**96.7**	**6.4**
86	4.4	17.6	13.9	0.79	1.41	12.5	22.4	96.2	7.0
86	4.6	17.6	13.9	0.79	1.41	12.5	22.4	95.7	7.5
86	5.0	17.6	13.9	0.79	1.40	12.6	22.4	95.0	8.7
95	2.7	16.9	13.6	0.81	1.65	10.2	22.5	111.7	2.9
95	3.3	16.9	13.6	0.81	1.61	10.5	22.4	108.6	4.1
95	3.7	17.0	13.7	0.81	1.59	10.6	22.4	107.1	5.0
95	4.2	17.0	13.7	0.81	1.57	10.8	22.4	105.6	6.2
95	4.4	17.0	13.7	0.80	1.57	10.9	22.4	105.2	6.8
95	4.6	17.0	13.7	0.80	1.56	10.9	22.3	104.7	7.3
95	5.0	17.0	13.7	0.80	1.55	11.0	22.3	103.9	8.5

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Table 43. GEH018 cooling performance (continued)

EWT	GPM	Total Mbtuh	Sen Mbtuh	SHR	Power kW	EER	Reject Mbtuh	LWT	Feet Head
105	2.7	16.2	13.3	0.82	1.86	8.7	22.5	121.7	2.8
105	3.3	16.2	13.3	0.82	1.82	8.9	22.4	118.6	4.0
105	3.7	16.2	13.3	0.82	1.80	9.0	22.4	117.1	4.9
105	4.2	16.3	13.3	0.82	1.77	9.2	22.3	115.6	6.1
105	4.4	16.3	13.3	0.82	1.77	9.2	22.3	115.1	6.6
105	4.6	16.3	13.3	0.82	1.76	9.2	22.3	114.7	7.1
105	5.0	16.3	13.3	0.82	1.75	9.3	22.2	113.9	8.3
110	2.7	15.8	13.2	0.83	2.00	7.9	22.6	126.8	2.7
110	3.3	15.8	13.2	0.83	1.95	8.1	22.5	123.6	3.9
110	3.7	15.8	13.2	0.83	1.92	8.2	22.4	122.1	4.8
110	4.2	15.9	13.2	0.83	1.90	8.4	22.3	120.6	6.0
110	4.4	15.9	13.2	0.83	1.89	8.4	22.3	120.2	6.5
110	4.6	15.9	13.2	0.83	1.88	8.4	22.3	119.7	7.0
110	5.0	15.9	13.2	0.83	1.87	8.5	22.3	118.9	8.1

Notes: Cooling performance data is tabulated at 80.6°F DB/66.2°F WB entering air at ARI/ISO 13256-1 rated cfm. For ARI/ISO 13256-1 certified ratings, see Table 17, p. 27. See Performance correction tables to correct performance at conditions other than those tabulated. Data shown is for unit performance only. Interpolation is permissible. Extrapolation is not. Rated GPM: 4.2 Minimum cfm 456; Rated cfm 570; Maximum cfm 684

Table 44. GEH018 heating performance

EWT	GPM	Htg Cap Mbtuh	Absorb Mbtuh	Power kW	COP	LWT	Feet Head
25	2.7	12.6	8.4	1.24	3.0	18.8	4.9
25	3.3	12.8	8.6	1.24	3.0	19.8	7.0
25	3.7	13.0	8.7	1.25	3.1	20.3	8.5
25	4.2	13.1	8.8	1.25	3.1	20.8	10.6
25	4.4	13.1	8.9	1.25	3.1	21.0	11.5
25	4.6	13.2	8.9	1.25	3.1	21.1	12.4
25	5.0	13.3	9.0	1.25	3.1	21.4	14.4
32	2.7	13.8	9.5	1.26	3.2	25.0	4.8
32	3.3	14.1	9.8	1.27	3.3	26.1	6.8
32	3.7	14.2	9.9	1.27	3.3	26.6	8.3
GLHP 32	**4.2**	**14.4**	**10.0**	**1.27**	**3.3**	**27.2**	**10.3**
32	4.4	14.5	10.1	1.28	3.3	27.4	11.2
32	4.6	14.5	10.2	1.28	3.3	27.6	12.1
32	5.0	14.6	10.3	1.28	3.3	27.9	14.0
45	2.7	16.6	12.1	1.32	3.7	36.0	3.9
45	3.3	17.0	12.5	1.33	3.8	37.4	5.5
45	3.7	17.2	12.7	1.33	3.8	38.1	6.7
45	4.2	17.4	12.9	1.34	3.8	38.9	8.3
45	4.4	17.5	12.9	1.34	3.8	39.1	9.0
45	4.6	17.6	13.0	1.34	3.8	39.4	9.7
45	5.0	17.7	13.1	1.34	3.9	39.8	11.2
55	2.7	18.8	14.2	1.37	4.0	44.5	3.7
55	3.3	19.3	14.6	1.38	4.1	46.1	5.2

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Table 44. GEH018 heating performance (continued)

EWT	GPM	Htg Cap Mbtuh	Absorb Mbtuh	Power kW	COP	LWT	Feet Head
55	3.7	19.5	14.8	1.38	4.1	47.0	6.4
55	4.2	19.7	15.0	1.38	4.2	47.9	8.0
55	4.4	19.8	15.1	1.38	4.2	48.1	8.6
55	4.6	19.9	15.1	1.39	4.2	48.4	9.3
55	5.0	20.0	15.3	1.39	4.2	48.9	10.8
68	2.7	21.7	16.8	1.42	4.5	55.5	3.5
68	3.3	22.1	17.3	1.42	4.6	57.5	5.0
68	3.7	22.4	17.5	1.43	4.6	58.5	6.1
WLHP 68	**4.2**	**22.6**	**17.7**	**1.43**	**4.6**	**59.6**	**7.6**
68	4.4	22.7	17.8	1.43	4.6	59.9	8.2
68	4.6	22.8	17.9	1.44	4.7	60.2	8.9
68	5.0	22.9	18.0	1.43	4.7	60.8	10.3
75	2.7	23.1	18.2	1.43	4.7	61.5	3.5
75	3.3	23.6	18.7	1.44	4.8	63.7	4.9
75	3.7	23.8	18.9	1.44	4.8	64.8	6.0
75	4.2	24.1	19.1	1.44	4.9	65.9	7.4
75	4.4	24.2	19.2	1.45	4.9	66.3	8.0
75	4.6	24.2	19.3	1.45	4.9	66.6	8.7
75	5.0	24.4	19.5	1.45	4.9	67.2	10.0
86	2.7	25.1	20.1	1.45	5.1	71.1	3.3
86	3.3	25.5	20.6	1.45	5.2	73.5	4.7
86	3.7	25.8	20.8	1.45	5.2	74.7	5.8
86	4.2	26.0	21.1	1.45	5.3	76.0	7.2
86	4.4	26.1	21.2	1.45	5.3	76.4	7.8
86	4.6	26.2	21.3	1.45	5.3	76.7	8.4
86	5.0	26.3	21.3	1.44	5.3	77.5	9.7

Notes: Heating performance data is tabulated at 68°F DB entering air at ARI/ISO 13256-1 rated cfm. For ARI/ISO 13256-1 certified ratings, see Table 17, p. 27. See Performance correction tables to correct performance at conditions other than those tabulated. Data shown is for unit performance only. Interpolation is permissible. Extrapolation is not. Rated GPM: 4.2 Minimum cfm 456; Rated cfm 570; Maximum cfm 684

Table 45. GEH018 fan correction factors

Entering cfm	Cooling Capacity	Sensible Capacity	Cooling Input Watts	Heating Capacity	Heating Input Watts
456	0.963	0.880	1.003	0.983	1.089
485	0.973	0.909	1.002	0.991	1.063
513	0.983	0.940	1.001	0.995	1.039
542	0.993	0.971	1.001	0.995	1.017
570	1.000	1.000	1.000	1.000	1.000
627	1.014	1.060	1.000	1.001	0.964
656	1.021	1.086	1.000	1.004	0.951
684	1.026	1.113	1.000	1.006	0.939

Table 46. GEV018 cooling performance

EWT	GPM	Total Mbtuh	Sen Mbtuh	SHR	Power kW	EER	Reject Mbtuh	LWT	Feet Head
45	2.7	18.5	14.1	0.76	0.92	20.1	21.6	61.0	3.2
45	3.3	18.5	14.1	0.76	0.89	20.8	21.6	58.1	4.6
45	3.7	18.5	14.1	0.76	0.88	21.2	21.5	56.6	5.6
45	4.2	18.5	14.1	0.76	0.86	21.5	21.5	55.2	7.0
45	4.4	18.5	14.1	0.76	0.85	21.7	21.4	54.7	7.6
45	4.6	18.5	14.1	0.76	0.85	21.8	21.4	54.3	8.2
45	5.0	18.5	14.1	0.76	0.84	22.0	21.4	53.6	9.5
55	2.7	18.5	14.1	0.76	1.05	17.7	22.1	71.4	3.1
55	3.3	18.5	14.1	0.76	1.01	18.3	22.0	68.3	4.4
55	3.7	18.5	14.1	0.76	1.00	18.6	21.9	66.8	5.4
55	4.2	18.5	14.1	0.76	0.98	18.9	21.9	65.4	6.7
55	4.4	18.5	14.1	0.76	0.97	19.0	21.8	64.9	7.3
55	4.6	18.5	14.1	0.76	0.97	19.1	21.8	64.5	7.9
55	5.0	18.5	14.1	0.76	0.96	19.3	21.8	63.7	9.2
68	2.7	18.2	14.0	0.77	1.22	14.9	22.4	84.6	2.9
68	3.3	18.3	14.0	0.77	1.19	15.4	22.3	81.5	4.2
68	3.7	18.3	14.0	0.76	1.17	15.7	22.3	80.1	5.1
68	4.2	18.3	14.0	0.76	1.15	15.9	22.3	78.6	6.4
68	4.4	18.3	14.0	0.76	1.15	16.0	22.2	78.1	7.0
68	4.6	18.3	14.0	0.76	1.14	16.1	22.2	77.7	7.5
68	5.0	18.3	14.0	0.76	1.13	16.2	22.2	76.9	8.7
77	2.7	17.9	13.8	0.77	1.35	13.2	22.5	93.7	2.9
77	3.3	17.9	13.9	0.77	1.31	13.7	22.4	90.6	4.1
77	3.7	18.0	13.9	0.77	1.29	13.9	22.4	89.1	5.0
GLHP 77	**4.2**	**18.0**	**13.9**	**0.77**	**1.28**	**14.1**	**22.3**	**87.6**	**6.2**
77	4.4	18.0	13.9	0.77	1.27	14.2	22.3	87.2	6.8
77	4.6	18.0	13.9	0.77	1.27	14.2	22.3	86.7	7.3
77	5.0	18.0	13.9	0.77	1.26	14.3	22.3	85.9	8.5
86	2.7	17.4	13.7	0.78	1.49	11.7	22.5	102.7	2.8
86	3.3	17.5	13.7	0.78	1.45	12.0	22.4	99.6	4.0
86	3.7	17.5	13.7	0.78	1.43	12.2	22.4	98.1	4.8
WLHP 86	**4.2**	**17.5**	**13.7**	**0.78**	**1.42**	**12.4**	**22.4**	**96.7**	**6.1**
86	4.4	17.6	13.7	0.78	1.41	12.5	22.4	96.2	6.6
86	4.6	17.6	13.7	0.78	1.40	12.5	22.4	95.7	7.1
86	5.0	17.6	13.7	0.78	1.39	12.6	22.3	94.9	8.2
95	2.7	16.9	13.5	0.80	1.66	10.2	22.6	111.7	2.7
95	3.3	17.0	13.5	0.80	1.61	10.5	22.5	108.6	3.9
95	3.7	17.0	13.5	0.80	1.59	10.7	22.4	107.1	4.7
95	4.2	17.0	13.5	0.80	1.57	10.8	22.4	105.7	5.9
95	4.4	17.0	13.5	0.79	1.57	10.9	22.4	105.2	6.4
95	4.6	17.0	13.5	0.79	1.56	10.9	22.4	104.7	6.9
95	5.0	17.0	13.5	0.79	1.55	11.0	22.3	103.9	8.0

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Table 46. GEV018 cooling performance (continued)

EWT	GPM	Total Mbtuh	Sen Mbtuh	SHR	Power kW	EER	Reject Mbtuh	LWT	Feet Head
105	2.7	16.3	13.3	0.81	1.87	8.7	22.7	121.8	2.6
105	3.3	16.4	13.3	0.81	1.83	9.0	22.6	118.7	3.7
105	3.7	16.4	13.3	0.81	1.80	9.1	22.5	117.2	4.6
105	4.2	16.4	13.3	0.81	1.78	9.2	22.5	115.7	5.7
105	4.4	16.4	13.3	0.81	1.78	9.2	22.4	115.2	6.2
105	4.6	16.4	13.3	0.81	1.76	9.3	22.4	114.7	6.7
105	5.0	16.4	13.3	0.81	1.75	9.3	22.4	114.0	7.8
110	2.7	16.0	13.2	0.82	2.02	7.9	22.9	127.0	2.6
110	3.3	16.0	13.2	0.82	1.97	8.2	22.8	123.8	3.7
110	3.7	16.0	13.2	0.82	1.94	8.3	22.7	122.3	4.5
110	4.2	16.1	13.2	0.82	1.92	8.4	22.6	120.8	5.7
110	4.4	16.1	13.2	0.82	1.91	8.4	22.6	120.3	6.1
110	4.6	16.1	13.2	0.82	1.90	8.5	22.5	119.8	6.6
110	5.0	16.1	13.2	0.82	1.89	8.5	22.5	119.0	7.7

Notes: Cooling performance data is tabulated at 80.6°F DB/66.2°F WB entering air at ARI/ISO 13256-1 rated cfm. For ARI/ISO 13256-1 certified ratings, see Table 18, p. 27. See Performance correction tables to correct performance at conditions other than those tabulated. Data shown is for unit performance only. Interpolation is permissible. Extrapolation is not. Rated GPM: 4.2 Minimum cfm 456; Rated cfm 570; Maximum cfm 684

Table 47. GEV018 heating performance

EWT	GPM	Htg Cap Mbtuh	Absorb Mbtuh	Power kW	COP	LWT	Feet Head
25	2.7	13.1	8.8	1.26	3.0	18.5	4.5
25	3.3	13.3	9.0	1.26	3.1	19.6	6.4
25	3.7	13.4	9.1	1.26	3.1	20.1	7.9
25	4.2	13.5	9.2	1.27	3.1	20.6	9.8
25	4.4	13.6	9.2	1.27	3.1	20.8	10.6
25	4.6	13.6	9.3	1.27	3.1	21.0	11.5
25	5.0	13.7	9.3	1.27	3.2	21.3	13.3
32	2.7	14.3	9.9	1.28	3.3	24.7	4.4
32	3.3	14.5	10.2	1.29	3.3	25.8	6.2
32	3.7	14.7	10.3	1.29	3.3	26.5	7.6
GLHP 32	**4.2**	**14.8**	**10.4**	**1.29**	**3.4**	**27.0**	**9.5**
32	4.4	14.9	10.5	1.29	3.4	27.2	10.3
32	4.6	14.9	10.5	1.29	3.4	27.4	11.1
32	5.0	15.0	10.6	1.29	3.4	27.8	12.9
45	2.7	17.1	12.5	1.34	3.7	35.7	3.6
45	3.3	17.5	12.9	1.35	3.8	37.2	5.0
45	3.7	17.6	13.0	1.35	3.8	38.0	6.1
45	4.2	17.8	13.2	1.35	3.9	38.7	7.6
45	4.4	17.9	13.3	1.35	3.9	39.0	8.3
45	4.6	18.0	13.3	1.36	3.9	39.2	9.0
45	5.0	18.1	13.4	1.36	3.9	39.6	10.4
55	2.7	19.2	14.5	1.38	4.1	44.3	3.4
55	3.3	19.6	14.9	1.39	4.1	46.0	4.8

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Table 47. GEV018 heating performance (continued)

EWT	GPM	Htg Cap Mbtuh	Absorb Mbtuh	Power kW	COP	LWT	Feet Head
55	3.7	19.8	15.1	1.39	4.2	46.8	5.9
55	4.2	20.1	15.3	1.40	4.2	47.7	7.4
55	4.4	20.1	15.3	1.40	4.2	48.0	8.0
55	4.6	20.2	15.4	1.40	4.2	48.3	8.6
55	5.0	20.3	15.5	1.40	4.2	48.8	10.0
68	2.7	21.9	17.0	1.43	4.5	55.4	3.3
68	3.3	22.4	17.5	1.44	4.6	57.4	4.6
68	3.7	22.6	17.7	1.44	4.6	58.4	5.6
WLHP 68	**4.2**	**22.8**	**17.9**	**1.44**	**4.6**	**59.5**	**7.0**
68	4.4	22.9	17.9	1.44	4.6	59.8	7.6
68	4.6	22.9	18.0	1.44	4.7	60.2	8.2
68	5.0	23.1	18.2	1.45	4.7	60.7	9.5
75	2.7	23.3	18.3	1.45	4.7	61.4	3.2
75	3.3	23.7	18.8	1.45	4.8	63.6	4.5
75	3.7	24.0	19.0	1.45	4.8	64.7	5.5
75	4.2	24.2	19.2	1.46	4.9	65.8	6.8
75	4.4	24.3	19.3	1.46	4.9	66.2	7.4
75	4.6	24.3	19.4	1.46	4.9	66.6	8.0
75	5.0	24.5	19.5	1.46	4.9	67.2	9.3
86	2.7	25.3	20.3	1.46	5.1	71.0	3.1
86	3.3	25.8	20.8	1.47	5.2	73.4	4.3
86	3.7	25.9	20.9	1.46	5.2	74.7	5.3
86	4.2	26.1	21.1	1.46	5.3	75.9	6.6
86	4.4	26.2	21.2	1.45	5.3	76.4	7.2
86	4.6	26.3	21.3	1.45	5.3	76.7	7.7
86	5.0	26.3	21.3	1.45	5.3	77.5	8.9

Notes: Heating performance data is tabulated at 68°F DB entering air at ARI/ISO 13256-1 rated cfm. For ARI/ISO 13256-1 certified ratings, see Table 18, p. 27. See Performance correction tables to correct performance at conditions other than those tabulated. Data shown is for unit performance only.Interpolation is permissible. Extrapolation is not. Rated GPM: 4.2 Minimum cfm 456; Rated cfm 570; Maximum cfm 684

Table 48. GEV018 fan correction factors

Entering cfm	Cooling Capacity	Sensible Capacity	Cooling Input Watts	Heating Capacity	Heating Input Watts
456	0.962	0.879	1.010	0.990	1.097
485	0.972	0.909	1.006	0.996	1.072
513	0.982	0.940	1.003	0.993	1.042
542	0.991	0.970	1.002	0.998	1.019
570	1.000	1.000	1.000	1.000	1.000
627	1.016	1.060	0.997	1.006	0.968
656	1.022	1.089	0.996	1.009	0.955
684	1.029	1.118	0.995	1.012	0.943

Table 49. GEH024 cooling performance

EWT	GPM	Total Mbtuh	Sen Mbtuh	SHR	Power kW	Reject Mbtuh	LWT	Feet Head
45	3.6	27.1	18.9	0.70	1.23	31.3	62.2	6.2
45	4.5	27.2	19.0	0.70	1.18	31.3	59.0	8.8
45	5.0	27.4	19.1	0.70	1.16	31.3	57.4	10.7
45	5.6	27.4	19.1	0.70	1.14	31.3	56.2	12.8
45	5.9	27.4	19.1	0.70	1.13	31.3	55.7	14.0
45	6.2	27.5	19.1	0.70	1.13	31.3	55.2	15.2
45	6.7	27.5	19.2	0.70	1.11	31.3	54.3	17.7
55	3.6	26.2	18.5	0.70	1.39	30.9	72.0	5.9
55	4.5	26.4	18.6	0.70	1.35	31.0	68.8	8.3
55	5.0	26.4	18.6	0.70	1.32	31.0	67.3	10.2
55	5.6	26.5	18.7	0.70	1.31	31.0	66.1	12.2
55	5.9	26.5	18.7	0.70	1.30	31.0	65.5	13.3
55	6.2	26.5	18.7	0.70	1.29	31.0	65.1	14.5
55	6.7	26.6	18.8	0.70	1.28	31.0	64.2	16.9
68	3.6	24.8	18.1	0.73	1.59	30.3	84.6	5.5
68	4.5	25.0	18.3	0.73	1.54	30.3	81.5	7.8
68	5.0	25.1	18.3	0.73	1.52	30.3	80.0	9.6
68	5.6	25.2	18.4	0.73	1.50	30.3	78.8	11.5
68	5.9	25.2	18.4	0.73	1.50	30.3	78.3	12.5
68	6.2	25.2	18.4	0.73	1.49	30.3	77.8	13.6
68	6.7	25.3	18.5	0.73	1.48	30.3	77.0	15.9
75	3.6	24.2	17.9	0.74	1.72	30.1	91.5	5.3
75	4.5	24.4	18.0	0.74	1.67	30.1	88.4	7.6
75	5.0	24.5	18.1	0.74	1.65	30.1	86.9	9.3
75	5.6	24.5	18.1	0.74	1.63	30.1	85.8	11.1
75	5.9	24.6	18.2	0.74	1.62	30.1	85.2	12.1
75	6.2	24.6	18.2	0.74	1.62	30.1	84.8	13.2
75	6.7	24.6	18.2	0.74	1.60	30.1	84.0	15.4
86	3.6	23.0	17.4	0.76	1.93	29.6	102.3	5.2
86	4.5	23.2	17.5	0.76	1.88	29.6	99.2	7.3
86	5.0	23.2	17.6	0.76	1.86	29.6	97.7	8.9
86	5.6	23.3	17.6	0.76	1.84	29.6	96.6	10.7
86	5.9	23.3	17.7	0.76	1.83	29.6	96.1	11.6
86	6.2	23.4	17.7	0.76	1.82	29.6	95.6	12.6
86	6.7	23.4	17.7	0.76	1.81	29.6	94.8	14.7
95	3.6	22.0	17.1	0.77	2.14	29.4	111.1	5.3
95	4.5	22.2	17.2	0.77	2.09	29.3	108.1	7.3
95	5.0	22.3	17.3	0.77	2.06	29.3	106.6	8.8
95	5.6	22.4	17.3	0.77	2.04	29.4	105.5	10.5
95	5.9	22.4	17.3	0.77	2.03	29.3	105.0	11.4
95	6.2	22.4	17.3	0.77	2.02	29.3	104.5	12.3
95	6.7	22.5	17.4	0.77	2.01	29.3	103.7	14.3

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Table 49. GEH024 cooling performance (continued)

EWT	GPM	Total Mbtuh	Sen Mbtuh	SHR	Power kW	Reject Mbtuh	LWT	Feet Head
105	3.6	20.9	16.6	0.80	2.39	29.0	121.0	5.5
105	4.5	21.1	16.8	0.80	2.33	29.0	118.0	7.4
105	5.0	21.2	16.9	0.80	2.30	29.0	116.5	8.8
105	5.6	21.2	16.9	0.80	2.28	29.0	115.4	10.4
105	5.9	21.2	16.9	0.80	2.27	29.0	114.9	11.3
105	6.2	21.3	17.0	0.80	2.27	29.0	114.4	12.2
105	6.7	21.3	17.0	0.80	2.25	29.0	113.6	14.1
110	3.6	20.3	16.4	0.81	2.52	28.9	125.9	5.8
110	4.5	20.4	16.6	0.81	2.47	28.9	122.9	7.6
110	5.0	20.5	16.7	0.81	2.44	28.8	121.4	8.9
110	5.6	20.6	16.7	0.81	2.42	28.8	120.3	10.5
110	5.9	20.6	16.7	0.81	2.41	28.8	119.8	11.3
110	6.2	20.6	16.7	0.81	2.40	28.8	119.4	12.2
110	6.7	20.7	16.8	0.81	2.38	28.8	118.6	14.0

Notes: Cooling performance data is tabulated at 80.6°F DB/66.2°F WB entering air at ARI/ISO 13256-1 rated cfm. For ARI/ISO 13256-1 certified ratings, see Table 17, p. 27. See Performance correction tables to correct performance at conditions other than those tabulated. Data shown is for unit performance only. Interpolation is permissible. Extrapolation is not. Rated GPM: 5.6 Minimum cfm 608; Rated cfm 760; Maximum cfm 912

Table 50. GEH024 heating performance

EWT	GPM	Htg Cap Mbtuh	Absorb Mbtuh	Power kW	LWT	Feet Head
25	3.6	17.9	11.7	1.83	18.6	6.8
25	4.5	18.2	12.0	1.83	19.7	9.6
25	5.0	18.4	12.1	1.83	20.2	11.7
25	5.6	18.5	12.2	1.83	20.6	13.9
25	5.9	18.5	12.3	1.83	20.8	15.2
25	6.2	18.6	12.3	1.83	21.0	16.4
25	6.7	18.7	12.4	1.83	21.3	19.1
32	3.6	19.6	13.4	1.84	24.7	6.6
32	4.5	20.0	13.7	1.84	25.9	9.3
32	5.0	20.2	13.9	1.84	26.5	11.4
32	5.6	20.3	14.0	1.84	27.0	13.6
32	5.9	20.4	14.1	1.84	27.2	14.8
32	6.2	20.4	14.1	1.84	27.4	16.0
32	6.7	20.5	14.2	1.84	27.8	18.6
45	3.6	23.2	16.9	1.87	35.7	6.2
45	4.5	23.6	17.2	1.87	37.3	8.8
45	5.0	23.9	17.5	1.88	38.1	10.7
45	5.6	24.0	17.6	1.88	38.7	12.8
45	5.9	24.1	17.7	1.88	39.0	14.0
45	6.2	24.1	17.7	1.87	39.3	15.2
45	6.7	24.2	17.8	1.88	39.7	17.7
55	3.6	26.1	19.5	1.91	44.3	5.9
55	4.5	26.5	20.0	1.91	46.1	8.3

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Table 50. GEH024 heating performance (continued)

EWT	GPM	Htg Cap Mbtuh	Absorb Mbtuh	Power kW	LWT	Feet Head
55	5.0	26.8	20.2	1.92	47.0	10.2
55	5.6	26.9	20.4	1.92	47.7	12.2
55	5.9	27.0	20.5	1.92	48.0	13.3
55	6.2	27.1	20.5	1.92	48.3	14.5
55	6.7	27.2	20.7	1.93	48.9	16.9
68	3.6	29.2	22.4	1.99	55.7	5.5
68	4.5	29.9	23.0	2.00	57.7	7.8
68	5.0	30.2	23.3	2.01	58.7	9.6
68	5.6	30.6	23.7	2.02	59.5	11.5
68	5.9	30.6	23.7	2.02	59.9	12.5
68	6.2	30.7	23.8	2.02	60.3	13.6
68	6.7	30.8	23.9	2.02	60.9	15.9
75	3.6	31.3	24.4	2.04	61.6	5.3
75	4.5	32.1	25.0	2.07	63.8	7.6
75	5.0	32.4	25.3	2.08	64.9	9.3
75	5.6	32.7	25.6	2.09	65.9	11.1
75	5.9	32.9	25.7	2.09	66.3	12.1
75	6.2	33.0	25.8	2.10	66.6	13.2
75	6.7	33.2	26.0	2.10	67.3	15.4
86	3.6	34.9	27.5	2.17	70.9	5.2
86	4.5	35.8	28.2	2.21	73.4	7.3
86	5.0	36.2	28.6	2.23	74.7	8.9
86	5.6	36.5	28.9	2.25	75.7	10.7
86	5.9	36.7	29.0	2.25	76.1	11.6
86	6.2	36.8	29.1	2.26	76.6	12.6
86	6.7	37.1	29.3	2.27	77.3	14.7

Notes: Heating performance data is tabulated at 68°F DB entering air at ARI/ISO 13256-1 rated cfm. For ARI/ISO 13256-1 certified ratings, see Table 17, p. 27. See Performance correction tables to correct performance at conditions other than those tabulated. Data shown is for unit performance only. Interpolation is permissible. Extrapolation is not. Rated GPM: 5.6 Minimum cfm 608; Rated cfm 760; Maximum cfm 912

Table 51. GEH024 fan correction factors

Entering cfm	Cooling Capacity	Sensible Capacity	Cooling Input Watts	Heating Capacity	Heating Input Watts
608	0.958	0.879	1.001	0.985	1.080
646	0.970	0.911	1.001	0.989	1.056
684	0.981	0.940	1.000	0.990	1.033
722	0.991	0.971	1.000	0.998	1.017
760	1.000	1.000	1.000	1.000	1.000
836	1.019	1.062	1.001	1.002	0.967
874	1.027	1.092	1.001	1.004	0.954
912	1.034	1.122	1.001	1.010	0.945

Table 52. GEH024 correction factors for variation in entering air temperature

Cooling Entering Air WB°F	Cooling Capacity	Cooling Input Watts	Sensible vs. Entering Dry Bulb Multipliers					Heating Entering Air DB°F	Heating Capacity	Heating Input Watts
			65.6	70.6	75.6	80.6	85.6			
49.4	0.925	1.007	1.020	1.088	1.156	*	*	53.0	1.023	0.857
56.3	0.926	1.008	0.811	1.040	1.158	*	*	58.0	1.015	0.904
60.3	0.930	1.007	0.607	0.841	1.073	*	*	63.0	1.005	0.948
63.2	0.965	1.004	0.451	0.690	0.924	1.159	*	68.0	1.000	1.000
66.2	1.000	1.000	—	0.526	0.765	1.000	1.236	73.0	0.989	1.047
72.1	1.082	0.999	—	—	0.430	0.676	0.916	78.0	0.980	1.099
77.1	1.153	1.008	—	—	—	0.383	0.630	83.0	0.972	1.152

Note: * = Sensible equals total capacity

Table 53. GEV024 cooling performance

EWT	GPM	Total Mbtuh	Sen Mbtuh	SHR	Power kW	Reject Mbtuh	LWT	Feet Head
45	3.6	26.8	18.7	0.70	1.24	31.0	62.0	6.0
45	4.5	26.9	18.8	0.70	1.19	31.0	58.8	8.4
45	5.0	27.0	18.9	0.70	1.17	31.0	57.3	10.3
45	5.6	27.1	18.9	0.70	1.15	31.0	56.1	12.3
45	5.9	27.1	19.0	0.70	1.14	31.0	55.6	13.4
45	6.2	27.2	19.0	0.70	1.14	31.1	55.1	14.6
45	6.7	27.2	19.0	0.70	1.12	31.1	54.2	17.1
55	3.6	26.0	18.4	0.71	1.41	30.8	71.9	5.7
55	4.5	26.1	18.5	0.71	1.36	30.8	68.7	8.0
55	5.0	26.2	18.6	0.71	1.34	30.8	67.2	9.8
55	5.6	26.3	18.6	0.71	1.32	30.8	66.0	11.8
55	5.9	26.3	18.6	0.71	1.31	30.8	65.5	12.8
55	6.2	26.3	18.6	0.71	1.31	30.8	65.0	13.9
55	6.7	26.4	18.7	0.71	1.29	30.8	64.2	16.3
68	3.6	25.0	18.5	0.74	1.61	30.5	84.7	5.3
68	4.5	25.1	18.6	0.74	1.57	30.5	81.6	7.6
68	5.0	25.2	18.7	0.74	1.54	30.5	80.1	9.2
68	5.6	25.3	18.7	0.74	1.53	30.5	78.9	11.1
68	5.9	25.3	18.7	0.74	1.52	30.5	78.4	12.1
68	6.2	25.4	18.8	0.74	1.51	30.5	77.9	13.1
68	6.7	25.4	18.8	0.74	1.50	30.5	77.1	15.4
75	3.6	24.4	18.2	0.75	1.75	30.3	91.7	5.1
75	4.5	24.5	18.4	0.75	1.70	30.3	88.5	7.4
75	5.0	24.6	18.4	0.75	1.67	30.3	87.0	9.0
75	5.6	24.7	18.5	0.75	1.66	30.4	85.8	10.8
75	5.9	24.7	18.5	0.75	1.65	30.4	85.3	11.7
75	6.2	24.8	18.5	0.75	1.64	30.4	84.9	12.7
75	6.7	24.8	18.6	0.75	1.63	30.4	84.0	14.9
86	3.6	23.5	18.0	0.77	1.97	30.2	102.6	5.0

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Table 53. GEV024 cooling performance (continued)

EWT	GPM	Total Mbtuh	Sen Mbtuh	SHR	Power kW	Reject Mbtuh	LWT	Feet Head
86	4.5	23.7	18.1	0.77	1.91	30.2	99.5	7.1
86	5.0	23.8	18.2	0.77	1.89	30.2	98.0	8.7
86	5.6	23.8	18.3	0.77	1.87	30.2	96.8	10.4
86	5.9	23.8	18.3	0.77	1.86	30.2	96.3	11.3
86	6.2	23.9	18.3	0.77	1.85	30.2	95.8	12.2
86	6.7	23.9	18.3	0.77	1.84	30.2	95.0	14.3
95	3.6	22.6	17.7	0.78	2.18	30.0	111.5	5.0
95	4.5	22.7	17.8	0.78	2.12	30.0	108.4	7.0
95	5.0	22.8	17.9	0.78	2.10	30.0	106.9	8.5
95	5.6	22.9	17.9	0.78	2.07	30.0	105.7	10.2
95	5.9	22.9	17.9	0.78	2.07	30.0	105.2	11.0
95	6.2	22.9	18.0	0.78	2.06	30.0	104.7	12.0
95	6.7	23.0	18.0	0.78	2.04	29.9	103.9	13.9
105	3.6	21.4	17.3	0.81	2.44	29.7	121.3	5.1
105	4.5	21.6	17.4	0.81	2.38	29.7	118.3	7.1
105	5.0	21.6	17.4	0.81	2.35	29.7	116.8	8.5
105	5.6	21.7	17.5	0.81	2.33	29.7	115.6	10.1
105	5.9	21.7	17.5	0.81	2.32	29.6	115.1	10.9
105	6.2	21.7	17.5	0.81	2.31	29.6	114.6	11.8
105	6.7	21.8	17.6	0.81	2.30	29.6	113.8	13.7
110	3.6	20.7	17.0	0.82	2.59	29.6	126.2	5.2
110	4.5	20.9	17.1	0.82	2.52	29.5	123.2	7.2
110	5.0	21.0	17.2	0.82	2.50	29.5	121.7	8.6
110	5.6	21.1	17.3	0.82	2.47	29.5	120.5	10.1
110	5.9	21.1	17.3	0.82	2.46	29.5	120.0	10.9
110	6.2	21.1	17.3	0.82	2.45	29.5	119.6	11.8
110	6.7	21.1	17.3	0.82	2.43	29.4	118.8	13.6

Notes: Cooling performance data is tabulated at 80.6°F DB/66.2°F WB entering air at ARI/ISO 13256-1 rated cfm. For ARI/ISO 13256-1 certified ratings, see Table 18, p. 27. See Performance correction tables to correct performance at conditions other than those tabulated. Data shown is for unit performance only. Interpolation is permissible. Extrapolation is not. Rated GPM: 5.6 Minimum cfm 608; Rated cfm 760; Maximum cfm 912

Table 54. GEV024 heating performance

EWT	GPM	Htg Cap Mbtuh	Absorb Mbtuh	Power kW	LWT	Feet Head
25	3.6	18.0	11.9	1.77	18.4	6.5
25	4.5	18.3	12.3	1.78	19.5	9.2
25	5.0	18.5	12.4	1.78	20.1	11.2
25	5.6	18.6	12.5	1.78	20.5	13.4
25	5.9	18.6	12.5	1.77	20.7	14.6
25	6.2	18.7	12.6	1.78	20.9	15.9
25	6.7	18.7	12.7	1.78	21.2	18.6
32	3.6	19.7	13.6	1.79	24.5	6.4
32	4.5	20.1	14.0	1.79	25.8	8.9
32	5.0	20.3	14.2	1.79	26.4	10.9

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Table 54. GEV024 heating performance (continued)

EWT	GPM	Htg Cap Mbtuh	Absorb Mbtuh	Power kW	LWT	Feet Head
32	5.6	20.3	14.2	1.79	26.9	13.1
32	5.9	20.4	14.3	1.79	27.1	14.2
32	6.2	20.5	14.4	1.80	27.3	15.5
32	6.7	20.6	14.5	1.80	27.7	18.1
45	3.6	23.2	17.0	1.83	35.7	6.0
45	4.5	23.6	17.3	1.84	37.3	8.4
45	5.0	23.8	17.5	1.84	38.1	10.3
45	5.6	23.9	17.7	1.84	38.7	12.3
45	5.9	24.0	17.7	1.84	39.0	13.4
45	6.2	24.1	17.8	1.84	39.2	14.6
45	6.7	24.2	17.9	1.84	39.7	17.1
55	3.6	26.0	19.6	1.87	44.2	5.7
55	4.5	26.4	20.0	1.87	46.1	8.0
55	5.0	26.6	20.2	1.88	47.0	9.8
55	5.6	26.8	20.4	1.88	47.7	11.8
55	5.9	26.9	20.5	1.88	48.0	12.8
55	6.2	27.0	20.6	1.88	48.3	13.9
55	6.7	27.1	20.7	1.89	48.8	16.3
68	3.6	29.1	22.4	1.94	55.7	5.3
68	4.5	29.8	23.1	1.96	57.7	7.6
68	5.0	30.1	23.4	1.96	58.7	9.2
68	5.6	30.3	23.6	1.96	59.6	11.1
68	5.9	30.4	23.7	1.97	59.9	12.1
68	6.2	30.5	23.8	1.97	60.3	13.1
68	6.7	30.7	23.9	1.97	60.9	15.4
75	3.6	31.2	24.4	1.99	61.6	5.1
75	4.5	31.9	25.0	2.01	63.8	7.4
75	5.0	32.3	25.4	2.02	64.9	9.0
75	5.6	32.6	25.6	2.03	65.8	10.8
75	5.9	32.7	25.7	2.03	66.2	11.7
75	6.2	32.8	25.8	2.04	66.6	12.7
75	6.7	33.0	26.0	2.05	67.3	14.9
86	3.6	34.7	27.5	2.11	70.9	5.0
86	4.5	35.6	28.3	2.15	73.4	7.1
86	5.0	36.0	28.6	2.17	74.6	8.7
86	5.6	36.3	28.9	2.18	75.7	10.4
86	5.9	36.5	29.0	2.19	76.1	11.3
86	6.2	36.6	29.1	2.19	76.5	12.2
86	6.7	36.8	29.3	2.20	77.3	14.3

Notes: Heating performance data is tabulated at 68°F DB entering air at ARI/ISO 13256-1 rated cfm. For ARI/ISO 13256-1 certified ratings, see Table 18, p. 27. See Performance correction tables to correct performance at conditions other than those tabulated. Data shown is for unit performance only. Interpolation is permissible. Extrapolation is not. Rated GPM: 5.6 Minimum cfm 608; Rated cfm 760; Maximum cfm 912

Table 55. GEV024 fan correction factors

Entering cfm	Cooling Capacity	Sensible Capacity	Cooling Input Watts	Heating Capacity	Heating Input Watts
608	0.957	0.874	1.001	0.987	1.077
646	0.969	0.905	1.000	0.991	1.055
684	0.980	0.937	1.000	0.995	1.036
722	0.990	0.968	1.000	1.001	1.021
760	1.000	1.000	1.000	1.000	1.000
836	1.018	1.062	1.001	1.004	0.972
874	1.026	1.093	1.001	1.007	0.961
912	1.034	1.123	1.002	1.008	0.950

Table 56. GEV024 correction factors for variation in entering air temperature

Cooling Entering Air WB°F	Cooling Capacity	Cooling Input Watts	Sensible vs. Entering Dry Bulb Multipliers					Heating Entering Air DB°F	Heating Capacity	Heating Input Watts
			65.6	70.6	75.6	80.6	85.6			
49.4	0.929	1.007	1.007	1.075	1.143	*	*	53.0	1.025	0.863
56.3	0.930	1.007	0.806	1.035	1.144	*	*	58.0	1.017	0.908
60.3	0.931	1.006	0.600	0.836	1.070	*	*	63.0	1.009	0.953
63.2	0.963	1.005	0.445	0.684	0.920	1.157	*	68.0	1.000	1.000
66.2	1.000	1.000	—	0.523	0.761	1.000	1.236	73.0	0.992	1.051
72.1	1.081	1.001	—	—	0.431	0.674	0.913	78.0	0.982	1.101
77.1	1.153	1.008	—	—	—	0.387	0.632	83.0	0.973	1.154

Note: * = Sensible equals total capacity

Table 57. GEH030 cooling performance

EWT	GPM	Total Mbtuh	Sen Mbtuh	SHR	Power kW	Reject Mbtuh	LWT	Feet Head
45	4.6	33.1	23.8	0.72	1.40	37.9	61.6	6.8
45	5.6	33.4	24.0	0.72	1.35	38.0	58.6	10.0
45	6.3	33.5	24.1	0.72	1.33	38.0	57.1	12.3
45	7.0	33.6	24.2	0.72	1.31	38.1	55.9	14.9
45	7.4	33.7	24.2	0.72	1.30	38.1	55.4	16.2
45	7.7	33.7	24.2	0.72	1.29	38.1	54.9	17.6
45	8.4	33.8	24.3	0.72	1.28	38.2	54.1	20.4
55	4.6	32.0	23.4	0.73	1.59	37.4	71.4	6.6
55	5.6	32.2	23.5	0.73	1.54	37.5	68.4	9.6
55	6.3	32.4	23.6	0.73	1.51	37.5	66.9	11.9
55	7.0	32.5	23.7	0.73	1.49	37.5	65.7	14.3
55	7.4	32.5	23.7	0.73	1.48	37.6	65.2	15.6
55	7.7	32.5	23.7	0.73	1.48	37.6	64.8	16.9
55	8.4	32.6	23.8	0.73	1.46	37.6	64.0	19.7
68	4.6	30.8	22.4	0.73	1.88	37.2	84.3	6.4
68	5.6	31.0	22.5	0.73	1.83	37.2	81.3	9.3
68	6.3	31.1	22.6	0.73	1.81	37.2	79.8	11.4

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Table 57. GEH030 cooling performance (continued)

EWT	GPM	Total Mbtuh	Sen Mbtuh	SHR	Power kW	Reject Mbtuh	LWT	Feet Head
68	7.0	31.1	22.6	0.73	1.79	37.2	78.6	13.8
68	7.4	31.2	22.7	0.73	1.78	37.2	78.1	15.0
68	7.7	31.2	22.7	0.73	1.77	37.2	77.7	16.3
68	8.4	31.2	22.7	0.73	1.76	37.2	76.9	18.9
75	4.6	29.9	22.0	0.74	2.04	36.9	91.2	6.2
75	5.6	30.1	22.2	0.74	1.98	36.9	88.2	9.1
75	6.3	30.2	22.2	0.74	1.96	36.8	86.7	11.1
75	7.0	30.2	22.3	0.74	1.93	36.8	85.5	13.4
75	7.4	30.3	22.3	0.74	1.93	36.8	85.0	14.6
75	7.7	30.3	22.3	0.74	1.92	36.9	84.6	15.9
75	8.4	30.3	22.3	0.74	1.90	36.8	83.8	18.5
86	4.6	28.3	21.9	0.77	2.23	35.9	101.8	5.9
86	5.6	28.5	22.0	0.77	2.17	35.9	98.8	8.7
86	6.3	28.6	22.1	0.77	2.15	35.9	97.4	10.7
86	7.0	28.7	22.1	0.77	2.12	35.9	96.3	12.8
86	7.4	28.7	22.2	0.77	2.11	35.9	95.8	14.0
86	7.7	28.7	22.2	0.77	2.11	35.9	95.3	15.2
86	8.4	28.8	22.2	0.77	2.09	35.9	94.5	17.7
95	4.6	27.2	21.4	0.79	2.47	35.6	110.6	5.7
95	5.6	27.3	21.6	0.79	2.41	35.6	107.7	8.2
95	6.3	27.4	21.6	0.79	2.38	35.6	106.3	10.1
95	7.0	27.5	21.7	0.79	2.36	35.5	105.2	12.2
95	7.4	27.5	21.7	0.79	2.35	35.5	104.7	13.3
95	7.7	27.5	21.7	0.79	2.34	35.5	104.2	14.5
95	8.4	27.6	21.7	0.79	2.32	35.5	103.5	16.8
105	4.6	25.7	20.9	0.81	2.77	35.2	120.5	5.5
105	5.6	25.9	21.0	0.81	2.70	35.1	117.5	8.0
105	6.3	26.0	21.1	0.81	2.67	35.1	116.1	9.9
105	7.0	26.1	21.2	0.81	2.64	35.1	115.0	11.9
105	7.4	26.1	21.2	0.81	2.63	35.1	114.5	12.9
105	7.7	26.1	21.2	0.81	2.62	35.0	114.1	14.1
105	8.4	26.2	21.2	0.81	2.61	35.1	113.3	16.4
110	4.6	24.9	20.6	0.83	2.94	35.0	125.4	5.5
110	5.6	25.1	20.7	0.83	2.87	34.9	122.5	7.9
110	6.3	25.2	20.8	0.83	2.83	34.9	121.1	9.7
110	7.0	25.3	20.9	0.83	2.81	34.9	120.0	11.7
110	7.4	25.3	20.9	0.83	2.80	34.8	119.5	12.8
110	7.7	25.3	20.9	0.83	2.79	34.9	119.1	13.9
110	8.4	25.4	20.9	0.83	2.77	34.8	118.3	16.2

Notes: Cooling performance data is tabulated at 80.6°F DB/66.2°F WB entering air at ARI/ISO 13256-1 rated cfm. For ARI/ISO 13256-1 certified ratings, see Table 17, p. 27. See Performance correction tables to correct performance at conditions other than those tabulated. Data shown is for unit performance only. Interpolation is permissible. Extrapolation is not. Rated GPM: 7.0 Maximum cfm 720; Rated cfm 900; Maximum cfm 1080

Table 58. GEH030 heating performance

EWT	GPM	Htg Cap Mbtuh	Absorb Mbtuh	Power kW	LWT	Feet Head
25	4.6	20.7	13.9	2.00	18.9	7.5
25	5.6	20.9	14.1	2.00	20.0	11.0
25	6.3	21.0	14.2	2.00	20.5	13.6
25	7.0	21.1	14.3	2.00	20.9	16.4
25	7.3	21.2	14.3	2.01	21.1	17.9
25	7.7	21.5	14.7	2.01	21.2	19.4
25	8.4	21.6	14.8	2.01	21.5	22.5
32	4.6	22.8	15.9	2.02	25.0	7.3
32	5.6	23.3	16.3	2.03	26.2	10.7
32	6.3	23.4	16.5	2.04	26.8	13.2
32	7.0	23.6	16.7	2.04	27.2	16.0
32	7.3	23.7	16.7	2.04	27.5	17.5
32	7.7	23.9	16.9	2.04	27.6	18.9
32	8.4	23.9	16.9	2.04	28.0	21.9
45	4.6	27.3	20.2	2.10	36.1	6.8
45	5.6	28.0	20.8	2.12	37.6	10.0
45	6.3	28.2	20.9	2.12	38.4	12.3
45	7.0	28.4	21.2	2.12	38.9	14.9
45	7.3	28.5	21.2	2.12	39.2	16.2
45	7.7	28.5	21.3	2.12	39.5	17.6
45	8.4	28.8	21.6	2.13	39.9	20.4
55	4.6	30.8	23.4	2.16	44.7	6.6
55	5.6	31.5	24.0	2.18	46.4	9.6
55	6.3	31.8	24.3	2.18	47.3	11.9
55	7.0	32.0	24.6	2.19	48.0	14.3
55	7.3	32.3	24.8	2.20	48.3	15.6
55	7.7	32.2	24.8	2.19	48.6	16.9
55	8.4	32.4	24.9	2.19	49.1	19.7
68	4.6	34.8	27.0	2.28	56.1	6.4
68	5.6	35.7	27.9	2.30	58.0	9.3
68	6.3	36.0	28.2	2.30	59.0	11.4
68	7.0	36.4	28.5	2.30	59.9	13.8
68	7.3	36.5	28.6	2.31	60.2	15.0
68	7.7	36.6	28.7	2.31	60.5	16.3
68	8.4	36.8	28.9	2.31	61.1	18.9
75	4.6	37.4	29.5	2.33	62.1	6.2
75	5.6	38.3	30.3	2.35	64.2	9.1
75	6.3	38.7	30.6	2.36	65.3	11.1
75	7.0	39.0	30.9	2.36	66.2	13.4
75	7.3	39.2	31.1	2.37	66.5	14.6
75	7.7	39.4	31.3	2.37	66.9	15.9
75	8.4	39.7	31.6	2.38	67.5	18.5
86	4.6	41.5	33.2	2.42	71.4	5.9

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Table 58. GEH030 heating performance (continued)

EWT	GPM	Htg Cap Mbtuh	Absorb Mbtuh	Power kW	LWT	Feet Head
86	5.6	42.5	34.2	2.45	73.8	8.7
86	6.3	43.0	34.6	2.46	75.0	10.7
86	7.0	43.4	35.0	2.47	76.0	12.8
86	7.3	43.6	35.1	2.47	76.4	14.0
86	7.7	43.7	35.3	2.48	76.8	15.2
86	8.4	44.0	35.5	2.48	77.5	17.7

Notes: Heating performance data is tabulated at 68°F DB entering air at ARI/ISO 13256-1 rated cfm. For ARI/ISO 13256-1 certified ratings, see Table 17, p. 27. See Performance correction tables to correct performance at conditions other than those tabulated. Data shown is for unit performance only. Interpolation is permissible. Extrapolation is not. Rated GPM: 7.0 Maximum cfm 720; Rated cfm 900; Maximum cfm 1080

Table 59. GEH030 fan correction factors

Entering cfm	Cooling Capacity	Sensible Capacity	Cooling Input Watts	Heating Capacity	Heating Input Watts
720	0.955	0.877	1.002	0.986	1.082
765	0.968	0.907	1.002	0.989	1.057
810	0.979	0.939	1.001	0.993	1.037
855	0.990	0.970	1.000	0.997	1.019
900	1.000	1.000	1.000	1.000	1.000
990	1.018	1.060	0.999	1.006	0.973
1035	1.025	1.089	0.999	1.009	0.961
1080	1.033	1.120	0.999	1.013	0.951

Table 60. GEH030 correction factors for variation in entering air temperature

Cooling Entering Air WB°F	Cooling Capacity	Cooling Input Watts	Sensible vs. Entering Dry Bulb Multipliers					Heating Entering Air DB°F	Heating Capacity	Heating Input Watts
			65.6	70.6	75.6	80.6	85.6			
49.4	0.924	1.009	0.994	1.060	1.129	*	*	53.0	1.026	0.864
56.3	0.925	1.009	0.805	1.022	1.129	*	*	58.0	1.022	0.912
60.3	0.926	1.009	0.618	0.839	1.058	*	*	63.0	1.012	0.956
63.2	0.958	1.006	0.479	0.702	0.922	1.141	*	68.0	1.000	1.000
66.2	1.000	1.000	—	0.553	0.775	1.000	1.220	73.0	0.991	1.051
72.1	1.090	0.989	—	—	0.480	0.706	0.928	78.0	0.981	1.101
77.1	1.166	0.984	—	—	—	0.446	0.672	83.0	0.972	1.154

Note: * = Sensible equals total capacity

Table 61. GEV030 cooling performance

EWT	GPM	Total Mbtuh	Sen Mbtuh	SHR	Power kW	Reject Mbtuh	LWT	Feet Head
45	4.6	32.3	22.9	0.71	1.44	37.3	61.4	6.3
45	5.6	32.6	23.1	0.71	1.38	37.3	58.3	9.1
45	6.3	32.7	23.2	0.71	1.36	37.3	56.8	11.2
45	7.0	32.8	23.2	0.71	1.33	37.4	55.7	13.5
45	7.4	32.8	23.3	0.71	1.33	37.4	55.2	14.7
45	7.7	32.9	23.3	0.71	1.32	37.4	54.7	16.0
45	8.4	32.9	23.3	0.71	1.30	37.4	53.9	18.6
55	4.6	31.3	22.5	0.72	1.62	36.8	71.2	6.0
55	5.6	31.5	22.6	0.72	1.57	36.8	68.2	8.7
55	6.3	31.6	22.7	0.72	1.55	36.8	66.7	10.7
55	7.0	31.6	22.8	0.72	1.53	36.9	65.5	13.0
55	7.4	31.7	22.8	0.72	1.52	36.9	65.0	14.1
55	7.7	31.7	22.8	0.72	1.51	36.9	64.6	15.3
55	8.4	31.8	22.8	0.72	1.50	36.9	63.8	17.8
68	4.6	30.0	22.3	0.74	1.86	36.4	84.0	5.6
68	5.6	30.2	22.4	0.74	1.81	36.4	81.0	8.2
68	6.3	30.3	22.5	0.74	1.78	36.4	79.5	10.1
68	7.0	30.4	22.5	0.74	1.76	36.4	78.4	12.1
68	7.4	30.4	22.6	0.74	1.75	36.4	77.9	13.2
68	7.7	30.4	22.6	0.74	1.75	36.4	77.5	14.3
68	8.4	30.5	22.6	0.74	1.73	36.4	76.7	16.7
75	4.6	29.2	22.0	0.75	2.01	36.1	90.9	5.5
75	5.6	29.4	22.1	0.75	1.95	36.1	87.9	7.9
75	6.3	29.5	22.2	0.75	1.93	36.1	86.5	9.8
75	7.0	29.6	22.2	0.75	1.91	36.1	85.3	11.8
75	7.4	29.6	22.3	0.75	1.90	36.1	84.8	12.9
75	7.7	29.6	22.3	0.75	1.89	36.1	84.4	14.0
75	8.4	29.7	22.3	0.75	1.88	36.1	83.6	16.3
86	4.6	27.9	21.5	0.77	2.26	35.6	101.7	5.3
86	5.6	28.1	21.6	0.77	2.20	35.6	98.7	7.7
86	6.3	28.1	21.6	0.77	2.17	35.6	97.3	9.5
86	7.0	28.2	21.7	0.77	2.15	35.6	96.2	11.4
86	7.4	28.2	21.7	0.77	2.14	35.6	95.7	12.4
86	7.7	28.3	21.7	0.77	2.14	35.6	95.2	13.5
86	8.4	28.3	21.8	0.77	2.12	35.6	94.5	15.7
95	4.6	26.7	21.0	0.79	2.50	35.3	110.5	5.1
95	5.6	26.9	21.2	0.79	2.44	35.2	107.6	7.3
95	6.3	27.0	21.2	0.79	2.41	35.2	106.2	9.0
95	7.0	27.0	21.3	0.79	2.39	35.2	105.1	10.8
95	7.4	27.1	21.3	0.79	2.38	35.2	104.6	11.8
95	7.7	27.1	21.3	0.79	2.37	35.2	104.1	12.8
95	8.4	27.1	21.3	0.79	2.35	35.2	103.4	14.9

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Table 61. GEV030 cooling performance (continued)

EWT	GPM	Total Mbtuh	Sen Mbtuh	SHR	Power kW	Reject Mbtuh	LWT	Feet Head
105	4.6	25.3	20.4	0.81	2.81	34.9	120.3	4.9
105	5.6	25.4	20.5	0.81	2.74	34.8	117.4	7.1
105	6.3	25.5	20.6	0.81	2.71	34.8	116.0	8.7
105	7.0	25.6	20.7	0.81	2.68	34.8	114.9	10.5
105	7.4	25.6	20.7	0.81	2.67	34.7	114.4	11.5
105	7.7	25.6	20.7	0.81	2.66	34.7	114.0	12.5
105	8.4	25.7	20.7	0.81	2.65	34.7	113.3	14.5
110	4.6	24.5	20.1	0.82	2.98	34.6	125.2	4.9
110	5.6	24.7	20.3	0.82	2.92	34.7	122.4	7.0
110	6.3	24.7	20.3	0.82	2.87	34.5	121.0	8.6
110	7.0	24.8	20.3	0.82	2.85	34.5	119.9	10.4
110	7.4	24.8	20.3	0.82	2.84	34.5	119.4	11.3
110	7.7	24.8	20.4	0.82	2.83	34.5	119.0	12.3
110	8.4	24.9	20.4	0.82	2.81	34.5	118.2	14.3

Notes: Cooling performance data is tabulated at 80.6°F DB/66.2°F WB entering air at ARI/ISO 13256-1 rated cfm. For ARI/ISO 13256-1 certified ratings, see Table 18, p. 27. See Performance correction tables to correct performance at conditions other than those tabulated. Data shown is for unit performance only. Interpolation is permissible. Extrapolation is not. Rated GPM: 7.0 Maximum cfm 720; Rated cfm 900; Maximum cfm 1080

Table 62. GEV030 heating performance

EWT	GPM	Htg Cap Mbtuh	Absorb Mbtuh	Power kW	LWT	Feet Head
25	4.6	21.2	14.5	1.96	18.6	6.8
25	5.6	21.6	14.9	1.96	19.7	9.9
25	6.3	21.8	15.1	1.97	20.2	12.3
25	7.0	21.9	15.2	1.97	20.7	14.9
25	7.3	22.1	15.3	1.97	20.8	16.2
25	7.7	22.1	15.4	1.97	21.0	17.6
25	8.4	22.2	15.5	1.97	21.3	20.5
32	4.6	23.3	16.5	1.99	24.7	6.7
32	5.6	23.7	16.9	1.99	26.0	9.8
32	6.3	24.0	17.2	1.99	26.5	12.1
32	7.0	24.2	17.4	2.00	27.0	14.6
32	7.3	24.3	17.5	2.00	27.3	15.9
32	7.7	24.4	17.6	2.00	27.4	17.2
32	8.4	24.5	17.7	2.00	27.8	20.0
45	4.6	27.1	20.1	2.04	36.2	6.3
45	5.6	27.7	20.7	2.05	37.6	9.1
45	6.3	28.0	20.9	2.06	38.4	11.2
45	7.0	28.2	21.2	2.06	38.9	13.5
45	7.3	28.4	21.3	2.07	39.2	14.7
45	7.7	28.5	21.4	2.07	39.4	16.0
45	8.4	28.7	21.6	2.07	39.9	18.6
55	4.6	30.4	23.3	2.10	44.8	6.0
55	5.6	31.3	24.1	2.12	46.4	8.7

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Table 62. GEV030 heating performance (continued)

EWT	GPM	Htg Cap Mbtuh	Absorb Mbtuh	Power kW	LWT	Feet Head
55	6.3	31.7	24.4	2.12	47.2	10.7
55	7.0	31.9	24.7	2.13	47.9	13.0
55	7.3	32.1	24.8	2.13	48.3	14.1
55	7.7	32.2	24.9	2.13	48.5	15.3
55	8.4	32.3	25.0	2.13	49.0	17.8
68	4.6	34.3	26.8	2.20	56.2	5.6
68	5.6	35.3	27.7	2.22	58.1	8.2
68	6.3	35.7	28.1	2.22	59.1	10.1
68	7.0	36.0	28.4	2.23	59.9	12.1
68	7.3	36.1	28.5	2.23	60.3	13.2
68	7.7	36.3	28.7	2.23	60.6	14.3
68	8.4	36.6	28.9	2.24	61.1	16.7
75	4.6	36.8	29.2	2.24	62.2	5.5
75	5.6	37.8	30.1	2.26	64.2	7.9
75	6.3	38.3	30.6	2.28	65.3	9.8
75	7.0	38.8	31.0	2.28	66.2	11.8
75	7.3	38.9	31.1	2.29	66.5	12.9
75	7.7	39.1	31.3	2.29	66.9	14.0
75	8.4	39.4	31.5	2.30	67.5	16.3
86	4.6	41.0	33.1	2.34	71.5	5.3
86	5.6	42.2	34.1	2.36	73.8	7.7
86	6.3	42.8	34.7	2.38	75.0	9.5
86	7.0	43.1	35.0	2.38	76.0	11.4
86	7.3	43.3	35.2	2.39	76.4	12.4
86	7.7	43.5	35.4	2.39	76.8	13.5
86	8.4	43.9	35.7	2.40	77.5	15.7

Notes: Heating performance data is tabulated at 68°F DB entering air at ARI/ISO 13256-1 rated cfm. For ARI/ISO 13256-1 certified ratings, see Table 18, p. 27. See Performance correction tables to correct performance at conditions other than those tabulated. Data shown is for unit performance only. Interpolation is permissible. Extrapolation is not. Rated GPM: 7.0 Maximum cfm 720; Rated cfm 900; Maximum cfm 1080

Table 63. GEV030 fan correction factors

Entering cfm	Cooling Capacity	Sensible Capacity	Cooling Input Watts	Heating Capacity	Heating Input Watts
720	0.956	0.876	1.005	0.989	1.075
765	0.968	0.910	1.004	0.993	1.054
810	0.979	0.941	1.001	0.997	1.036
855	0.990	0.969	1.001	1.002	1.020
900	1.000	1.000	1.000	1.000	1.000
990	1.017	1.060	0.999	1.008	0.976
1035	1.025	1.088	0.999	1.007	0.963
1080	1.033	1.116	0.999	1.008	0.952

Table 64. GEV030 correction factors for variation in entering air temperature

Cooling Entering Air WB°F	Cooling Capacity	Cooling Input Watts	Sensible vs. Entering Dry Bulb Multipliers					Heating Entering Air DB°F	Heating Capacity	Heating Input Watts
			65.6	70.6	75.6	80.6	85.6			
49.4	0.922	1.009	0.992	1.061	1.131	*	*	53.0	1.030	0.868
56.3	0.924	1.009	0.800	1.013	1.132	*	*	58.0	1.021	0.911
60.3	0.926	1.009	0.612	0.837	1.055	*	*	63.0	1.010	0.954
63.2	0.956	1.008	0.467	0.694	0.922	1.138	*	68.0	1.000	1.000
66.2	1.000	1.000	—	0.545	0.775	1.000	1.214	73.0	0.988	1.049
72.1	1.095	0.991	—	—	0.467	0.697	0.925	78.0	0.982	1.101
77.1	1.174	0.984	—	—	—	0.425	0.663	83.0	0.970	1.151

Note: * = Sensible equals total capacity

Table 65. GEH036 cooling performance

EWT	GPM	Total Mbtuh	Sen Mbtuh	SHR	Power kW	Reject Mbtuh	LWT	Feet Head
45	5.5	39.7	27.8	0.70	1.31	44.2	61.2	6.8
45	6.7	39.9	28.0	0.70	1.24	44.2	58.2	9.9
45	7.6	40.1	28.1	0.70	1.21	44.2	56.7	12.1
45	8.4	40.1	28.1	0.70	1.19	44.2	55.5	14.6
45	8.8	40.2	28.2	0.70	1.18	44.2	55.0	15.9
45	9.2	40.2	28.2	0.70	1.17	44.2	54.6	17.3
45	10.1	40.3	28.2	0.70	1.15	44.2	53.8	20.1
55	5.5	38.4	27.4	0.71	1.54	43.7	71.0	6.5
55	6.7	38.6	27.5	0.71	1.48	43.7	68.0	9.5
55	7.6	38.7	27.6	0.71	1.45	43.6	66.5	11.6
55	8.4	38.8	27.6	0.71	1.42	43.7	65.4	14.0
55	8.8	38.8	27.7	0.71	1.41	43.7	64.9	15.3
55	9.2	38.9	27.7	0.71	1.40	43.7	64.4	16.6
55	10.1	38.9	27.7	0.71	1.39	43.6	63.7	19.3
68	5.5	36.7	27.0	0.73	1.83	43.0	83.7	6.1
68	6.7	36.9	27.1	0.73	1.77	43.0	80.8	9.0
68	7.6	37.0	27.2	0.73	1.74	43.0	79.4	11.0
68	8.4	37.1	27.3	0.73	1.71	43.0	78.2	13.3
68	8.8	37.2	27.3	0.73	1.70	43.0	77.7	14.5
68	9.2	37.2	27.3	0.73	1.69	43.0	77.3	15.7
68	10.1	37.2	27.3	0.73	1.68	43.0	76.5	18.3
75	5.5	35.7	26.6	0.75	2.00	42.5	90.6	6.0
75	6.7	35.9	26.8	0.75	1.94	42.5	87.7	8.8
75	7.6	36.0	26.8	0.75	1.91	42.5	86.3	10.7
75	8.4	36.1	26.9	0.75	1.89	42.5	85.1	13.0
75	8.8	36.1	26.9	0.75	1.88	42.5	84.6	14.1
75	9.2	36.2	26.9	0.75	1.87	42.5	84.2	15.3
75	10.1	36.2	27.0	0.75	1.85	42.5	83.4	17.9
86	5.5	34.1	26.1	0.77	2.30	42.0	101.4	5.8

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Table 65. GEH036 cooling performance (continued)

EWT	GPM	Total Mbtuh	Sen Mbtuh	SHR	Power kW	Reject Mbtuh	LWT	Feet Head
86	6.7	34.3	26.3	0.77	2.23	41.9	98.5	8.5
86	7.6	34.4	26.4	0.77	2.19	41.9	97.1	10.4
86	8.4	34.5	26.4	0.77	2.17	41.9	96.0	12.5
86	8.8	34.6	26.5	0.77	2.16	41.9	95.5	13.6
86	9.2	34.6	26.5	0.77	2.15	41.9	95.1	14.7
86	10.1	34.6	26.5	0.77	2.13	41.9	94.3	17.2
95	5.5	32.6	25.6	0.79	2.58	41.4	110.2	5.6
95	6.7	32.8	25.8	0.79	2.51	41.4	107.3	8.1
95	7.6	32.9	25.9	0.79	2.48	41.3	105.9	9.9
95	8.4	33.0	25.9	0.79	2.44	41.3	104.8	11.9
95	8.8	33.0	26.0	0.79	2.43	41.3	104.4	13.0
95	9.2	33.0	26.0	0.79	2.42	41.3	103.9	14.1
95	10.1	33.1	26.0	0.79	2.40	41.3	103.2	16.5
105	5.5	30.7	25.0	0.81	2.93	40.7	119.9	5.4
105	6.7	30.9	25.2	0.81	2.85	40.6	117.1	7.8
105	7.6	31.0	25.2	0.81	2.82	40.6	115.7	9.6
105	8.4	31.1	25.3	0.81	2.79	40.6	114.7	11.6
105	8.8	31.1	25.3	0.81	2.77	40.6	114.2	12.7
105	9.2	31.2	25.4	0.81	2.76	40.6	113.8	13.7
105	10.1	31.2	25.4	0.81	2.74	40.6	113.1	16.0
110	5.5	29.7	24.6	0.83	3.12	40.3	124.8	5.4
110	6.7	29.9	24.8	0.83	3.04	40.3	122.0	7.7
110	7.6	30.0	24.9	0.83	3.00	40.3	120.7	9.5
110	8.4	30.1	25.0	0.83	2.97	40.2	119.6	11.5
110	8.8	30.1	25.0	0.83	2.96	40.2	119.1	12.5
110	9.2	30.2	25.0	0.83	2.94	40.2	118.7	13.6
110	10.1	30.2	25.1	0.83	2.93	40.2	118.0	15.8

Notes: Cooling performance data is tabulated at 80.6°F DB/66.2°F WB entering air at ARI/ISO 13256-1 rated cfm. For ARI/ISO 13256-1 certified ratings, see Table 17, p. 27. See Performance correction tables to correct performance at conditions other than those tabulated. Data shown is for unit performance only. Interpolation is permissible. Extrapolation is not. Rated GPM: 8.4 Minimum cfm 912; Rated cfm 1140; Maximum cfm 1368

Table 66. GEH036 heating performance

EWT	GPM	Htg Cap Mbtuh	Absorb Mbtuh	Power kW	LWT	Feet Head
25	5.5	26.7	19.5	2.11	17.9	7.7
25	6.7	27.1	19.9	2.11	19.1	10.8
25	7.6	27.3	20.1	2.12	19.7	13.2
25	8.4	27.5	20.3	2.12	20.2	15.8
25	8.8	27.6	20.4	2.12	20.4	17.3
25	9.2	27.6	20.4	2.11	20.6	18.7
25	10.1	27.7	20.5	2.12	20.9	21.7
32	5.5	29.4	22.0	2.16	23.9	7.4
32	6.7	29.9	22.5	2.17	25.3	10.6
32	7.6	30.1	22.7	2.17	26.0	12.9

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Table 66. GEH036 heating performance (continued)

EWT	GPM	Htg Cap Mbtuh	Absorb Mbtuh	Power kW	LWT	Feet Head
32	8.4	30.4	22.9	2.18	26.5	15.5
32	8.8	30.5	23.0	2.18	26.8	16.9
32	9.2	30.6	23.1	2.18	27.0	18.4
32	10.1	30.7	23.2	2.19	27.4	21.3
45	5.5	34.9	27.1	2.26	35.1	6.8
45	6.7	35.4	27.6	2.26	36.8	9.9
45	7.6	35.7	27.9	2.27	37.6	12.1
45	8.4	35.9	28.1	2.28	38.3	14.6
45	8.8	36.0	28.2	2.28	38.6	15.9
45	9.2	36.1	28.3	2.28	38.9	17.3
45	10.1	36.2	28.4	2.28	39.4	20.1
55	5.5	39.2	31.2	2.36	43.6	6.5
55	6.7	39.9	31.8	2.37	45.5	9.5
55	7.6	40.2	32.1	2.37	46.5	11.6
55	8.4	40.5	32.4	2.38	47.3	14.0
55	8.8	40.6	32.5	2.39	47.6	15.3
55	9.2	40.8	32.6	2.39	47.9	16.6
55	10.1	40.9	32.8	2.39	48.5	19.3
68	5.5	44.6	36.0	2.52	54.8	6.1
68	6.7	45.6	36.9	2.54	57.0	9.0
68	7.6	46.0	37.3	2.54	58.1	11.0
68	8.4	46.3	37.6	2.55	59.0	13.3
68	8.8	46.4	37.7	2.55	59.4	14.5
68	9.2	46.6	37.8	2.55	59.8	15.7
68	10.1	46.8	38.1	2.56	60.4	18.3
75	5.5	48.0	39.0	2.61	60.7	6.0
75	6.7	49.0	40.0	2.64	63.1	8.8
75	7.6	49.7	40.6	2.66	64.3	10.7
75	8.4	50.1	41.0	2.67	65.2	13.0
75	8.8	50.2	41.1	2.67	65.7	14.1
75	9.2	50.3	41.2	2.66	66.1	15.3
75	10.1	50.6	41.4	2.67	66.8	17.9
86	5.5	53.6	44.1	2.78	69.9	5.8
86	6.7	54.7	45.1	2.80	72.6	8.5
86	7.6	55.3	45.6	2.82	73.9	10.4
86	8.4	55.7	46.0	2.83	75.0	12.5
86	8.8	55.8	46.2	2.83	75.5	13.6
86	9.2	56.0	46.3	2.84	76.0	14.7
86	10.1	56.2	46.5	2.84	76.8	17.2

Notes: Heating performance data is tabulated at 68°F DB entering air at ARI/ISO 13256-1 rated cfm. For ARI/ISO 13256-1 certified ratings, see Table 17, p. 27. See Performance correction tables to correct performance at conditions other than those tabulated. Data shown is for unit performance only. Interpolation is permissible. Extrapolation is not. Rated GPM: 8.4 Minimum cfm 912; Rated cfm 1140; Maximum cfm 1368

Table 67. GEH036 fan correction factors

Entering cfm	Cooling Capacity	Sensible Capacity	Cooling Input Watts	Heating Capacity	Heating Input Watts
912	0.953	0.871	1.003	0.989	1.098
969	0.966	0.903	1.003	0.992	1.068
1026	0.978	0.935	1.000	0.995	1.043
1083	0.990	0.968	1.000	0.998	1.021
1140	1.000	1.000	1.000	1.000	1.000
1254	1.018	1.062	1.000	1.005	0.967
1311	1.027	1.094	1.000	1.007	0.952
1368	1.034	1.123	1.000	1.008	0.938

Table 68. GEH036 correction factors for variation in entering air temperature

Cooling Entering Air WB°F	Cooling Capacity	Cooling Input Watts	Sensible vs. Entering Dry Bulb Multipliers					Heating Entering Air DB°F	Heating Capacity	Heating Input Watts
			65.6	70.6	75.6	80.6	85.6			
49.4	0.924	1.007	0.997	1.066	1.136	*	*	53.0	1.024	0.840
56.3	0.925	1.007	0.799	1.034	1.137	*	*	58.0	1.017	0.893
60.3	0.926	1.007	0.589	0.831	1.072	*	*	63.0	1.009	0.947
63.2	0.959	1.004	0.429	0.676	0.919	1.160	*	68.0	1.000	1.000
66.2	1.000	1.000	—	0.507	0.752	1.000	1.239	73.0	0.995	1.061
72.1	1.092	0.997	—	—	0.413	0.662	0.909	78.0	0.983	1.117
77.1	1.175	0.997	—	—	—	0.363	0.615	83.0	0.974	1.179

Note: * = Sensible equals total capacity

Table 69. GEV036 cooling performance

EWT	GPM	Total Mbtuh	Sen Mbtuh	SHR	Power kW	Reject Mbtuh	LWT	Feet Head
45	5.5	40.2	28.6	0.71	1.83	46.4	62.0	6.1
45	6.7	40.4	28.8	0.71	1.76	46.5	58.8	8.8
45	7.6	40.6	28.8	0.71	1.73	46.5	57.3	10.8
45	8.4	40.7	28.9	0.71	1.71	46.5	56.1	13.0
45	8.8	40.7	29.0	0.71	1.69	46.5	55.5	14.2
45	9.2	40.7	29.0	0.71	1.68	46.5	55.1	15.4
45	10.1	40.8	29.0	0.71	1.67	46.5	54.2	18.0
55	5.5	38.9	28.1	0.72	2.06	45.9	71.8	5.8
55	6.7	39.2	28.3	0.72	2.00	46.0	68.7	8.4
55	7.6	39.3	28.4	0.72	1.97	46.0	67.2	10.4
55	8.4	39.3	28.4	0.72	1.94	46.0	65.9	12.5
55	8.8	39.4	28.5	0.72	1.93	46.0	65.4	13.7
55	9.2	39.4	28.5	0.72	1.92	46.0	65.0	14.8
55	10.1	39.5	28.5	0.72	1.91	46.0	64.1	17.2
68	5.5	37.3	27.6	0.74	2.35	45.4	84.6	5.5
68	6.7	37.6	27.8	0.74	2.29	45.4	81.5	7.9
68	7.6	37.7	27.9	0.74	2.26	45.4	80.0	9.8

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Table 69. GEV036 cooling performance (continued)

EWT	GPM	Total Mbtuh	Sen Mbtuh	SHR	Power kW	Reject Mbtuh	LWT	Feet Head
68	8.4	37.7	27.9	0.74	2.23	45.4	78.8	11.8
68	8.8	37.8	27.9	0.74	2.22	45.4	78.3	12.8
68	9.2	37.8	28.0	0.74	2.21	45.4	77.8	13.9
68	10.1	37.9	28.0	0.74	2.20	45.4	77.0	16.2
75	5.5	36.3	27.3	0.75	2.52	44.9	91.5	5.3
75	6.7	36.5	27.4	0.75	2.46	44.9	88.4	7.7
75	7.6	36.6	27.5	0.75	2.43	44.9	86.9	9.5
75	8.4	36.7	27.6	0.75	2.40	44.9	85.7	11.5
75	8.8	36.7	27.6	0.75	2.39	44.9	85.2	12.5
75	9.2	36.8	27.6	0.75	2.38	44.9	84.7	13.6
75	10.1	36.8	27.6	0.75	2.37	44.9	83.9	15.8
86	5.5	34.8	26.8	0.77	2.81	44.4	102.3	5.1
86	6.7	35.0	27.0	0.77	2.74	44.3	99.2	7.4
86	7.6	35.1	27.0	0.77	2.71	44.3	97.7	9.1
86	8.4	35.2	27.1	0.77	2.68	44.3	96.5	11.0
86	8.8	35.2	27.1	0.77	2.67	44.3	96.0	12.0
86	9.2	35.2	27.1	0.77	2.66	44.3	95.6	13.0
86	10.1	35.3	27.2	0.77	2.64	44.3	94.8	15.1
95	5.5	33.2	26.3	0.79	3.08	43.8	111.0	4.9
95	6.7	33.4	26.4	0.79	3.01	43.7	108.0	7.1
95	7.6	33.5	26.5	0.79	2.98	43.7	106.6	8.7
95	8.4	33.6	26.6	0.79	2.95	43.7	105.4	10.5
95	8.8	33.7	26.6	0.79	2.94	43.7	104.9	11.4
95	9.2	33.7	26.6	0.79	2.93	43.7	104.5	12.4
95	10.1	33.7	26.7	0.79	2.91	43.7	103.7	14.4
105	5.5	31.4	25.6	0.82	3.42	43.0	120.8	4.8
105	6.7	31.6	25.8	0.82	3.34	43.0	117.8	6.9
105	7.6	31.7	25.9	0.82	3.31	43.0	116.4	8.4
105	8.4	31.8	25.9	0.82	3.28	42.9	115.2	10.2
105	8.8	31.8	26.0	0.82	3.27	42.9	114.7	11.1
105	9.2	31.8	26.0	0.82	3.26	42.9	114.3	12.0
105	10.1	31.9	26.0	0.82	3.24	42.9	113.5	14.0
110	5.5	30.4	25.3	0.83	3.61	42.7	125.6	4.7
110	6.7	30.6	25.5	0.83	3.53	42.6	122.7	6.8
110	7.6	30.7	25.6	0.83	3.49	42.6	121.3	8.3
110	8.4	30.8	25.6	0.83	3.46	42.6	120.1	10.0
110	8.8	30.8	25.6	0.83	3.45	42.6	119.6	10.9
110	9.2	30.8	25.7	0.83	3.44	42.5	119.2	11.9
110	10.1	30.9	25.7	0.83	3.42	42.5	118.4	13.8

Notes: Cooling performance data is tabulated at 80.6°F DB/66.2°F WB entering air at ARI/ISO 13256-1 rated cfm. For ARI/ISO 13256-1 certified ratings, see Table 18, p. 27. See Performance correction tables to correct performance at conditions other than those tabulated. Data shown is for unit performance only. Interpolation is permissible. Extrapolation is not. Rated GPM: 8.4 Minimum cfm 912; Rated cfm 1140; Maximum cfm 1368

Table 70. GEV036 heating performance

EWT	GPM	Htg Cap Mbtuh	Absorb Mbtuh	Power kW	LWT	Feet Head
25	5.5	27.6	18.6	2.61	18.2	6.6
25	6.7	27.9	19.0	2.61	19.3	9.5
25	7.6	28.2	19.2	2.62	19.9	11.8
25	8.4	28.3	19.4	2.62	20.4	14.3
25	8.8	28.4	19.5	2.62	20.6	15.6
25	9.2	28.5	19.5	2.63	20.8	16.9
25	10.1	28.6	19.7	2.63	21.1	19.6
32	5.5	30.2	21.2	2.66	24.2	6.5
32	6.7	30.8	21.7	2.67	25.5	9.4
32	7.6	31.0	21.9	2.67	26.2	11.6
32	8.4	31.3	22.1	2.68	26.7	14.0
32	8.8	31.3	22.2	2.68	27.0	15.3
32	9.2	31.3	22.2	2.67	27.2	16.6
32	10.1	31.5	22.4	2.67	27.6	19.2
45	5.5	35.8	26.4	2.74	35.3	6.1
45	6.7	36.4	27.0	2.75	37.0	8.8
45	7.6	36.6	27.2	2.75	37.8	10.8
45	8.4	36.9	27.5	2.76	38.5	13.0
45	8.8	37.0	27.6	2.76	38.7	14.2
45	9.2	37.1	27.6	2.76	39.0	15.4
45	10.1	37.2	27.8	2.77	39.5	18.0
55	5.5	40.3	30.7	2.84	43.8	5.8
55	6.7	41.0	31.3	2.85	45.7	8.4
55	7.6	41.3	31.6	2.85	46.6	10.4
55	8.4	41.6	31.9	2.86	47.4	12.5
55	8.8	41.7	31.9	2.86	47.8	13.7
55	9.2	41.9	32.1	2.86	48.1	14.8
55	10.1	42.1	32.3	2.87	48.6	17.2
68	5.5	45.9	35.7	2.99	54.9	5.5
68	6.7	46.9	36.7	3.01	57.1	7.9
68	7.6	47.5	37.1	3.03	58.2	9.8
68	8.4	47.6	37.3	3.02	59.1	11.8
68	8.8	47.8	37.4	3.03	59.5	12.8
68	9.2	47.9	37.5	3.03	59.9	13.9
68	10.1	48.1	37.7	3.03	60.5	16.2
75	5.5	49.5	39.0	3.09	60.7	5.3
75	6.7	50.5	39.9	3.10	63.1	7.7
75	7.6	50.9	40.3	3.10	64.3	9.5
75	8.4	51.3	40.7	3.11	65.3	11.5
75	8.8	51.4	40.8	3.11	65.7	12.5
75	9.2	51.5	40.9	3.12	66.1	13.6
75	10.1	51.8	41.1	3.12	66.8	15.8
86	5.5	54.9	43.9	3.22	69.9	5.1

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Table 70. GEV036 heating performance (continued)

EWT	GPM	Htg Cap Mbtuh	Absorb Mbtuh	Power kW	LWT	Feet Head
86	6.7	56.1	45.0	3.26	72.6	7.4
86	7.6	56.6	45.5	3.27	74.0	9.1
86	8.4	57.0	45.8	3.28	75.1	11.0
86	8.8	57.1	45.9	3.28	75.6	12.0
86	9.2	57.3	46.1	3.29	76.0	13.0
86	10.1	57.6	46.3	3.29	76.8	15.1

Notes: Heating performance data is tabulated at 68°F DB entering air at ARI/ISO 13256-1 rated cfm. For ARI/ISO 13256-1 certified ratings, see Table 18, p. 27. See Performance correction tables to correct performance at conditions other than those tabulated. Data shown is for unit performance only. Interpolation is permissible. Extrapolation is not. Rated GPM: 8.4 Minimum cfm 912; Rated cfm 1140; Maximum cfm 1368

Table 71. GEV036 fan correction factors

Entering cfm	Cooling Capacity	Sensible Capacity	Cooling Input Watts	Heating Capacity	Heating Input Watts
912	0.953	0.870	1.002	0.989	1.077
969	0.966	0.903	1.002	0.992	1.054
1026	0.978	0.935	1.002	0.996	1.034
1083	0.990	0.968	1.000	0.998	1.016
1140	1.000	1.000	1.000	1.000	1.000
1254	1.019	1.064	1.000	1.007	0.973
1311	1.027	1.095	1.000	1.005	0.959
1368	1.035	1.126	1.000	1.006	0.948

Table 72. GEV036 correction factors for variation in entering air temperature

Cooling Entering Air WB°F	Cooling Capacity	Cooling Input Watts	Sensible vs. Entering Dry Bulb Multipliers					Heating Entering Air DB°F	Heating Capacity	Heating Input Watts
			65.6	70.6	75.6	80.6	85.6			
49.4	0.926	1.004	0.993	1.062	1.131	*	*	53.0	1.019	0.866
56.3	0.927	1.005	0.800	1.032	1.133	*	*	58.0	1.015	0.909
60.3	0.928	1.005	0.594	0.832	1.072	*	*	63.0	1.007	0.954
63.2	0.959	1.002	0.440	0.681	0.920	1.157	*	68.0	1.000	1.000
66.2	1.000	1.000	—	0.518	0.758	1.000	1.237	73.0	0.992	1.046
72.1	1.092	0.999	—	—	0.429	0.672	0.915	78.0	0.984	1.095
77.1	1.176	0.999	—	—	—	0.382	0.629	83.0	0.975	1.145

Note: * = Sensible equals total capacity

Table 73. GEH042 cooling performance

EWT	GPM	Total Mbtuh	Sen Mbtuh	SHR	Power kW	Reject Mbtuh	LWT	Feet Head
45	6.4	47.1	34.2	0.73	2.22	54.7	62.2	7.8
45	7.8	47.4	34.4	0.73	2.16	54.8	59.0	11.3
45	8.8	47.6	34.6	0.73	2.13	54.9	57.5	13.8
45	9.8	47.7	34.6	0.73	2.11	54.9	56.2	16.6
45	10.3	47.7	34.6	0.73	2.11	54.9	55.7	18.1
45	10.8	47.8	34.7	0.73	2.10	55.0	55.2	19.6

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Table 73. GEH042 cooling performance (continued)

EWT	GPM	Total Mbtuh	Sen Mbtuh	SHR	Power kW	Reject Mbtuh	LWT	Feet Head
45	11.8	47.9	34.7	0.73	2.08	55.0	54.3	22.9
55	6.4	45.5	33.6	0.74	2.44	53.9	71.9	7.5
55	7.8	45.8	33.7	0.74	2.38	53.9	68.7	10.8
55	8.8	45.9	33.8	0.74	2.35	53.9	67.2	13.3
55	9.8	46.0	33.9	0.74	2.33	54.0	66.0	16.0
55	10.3	46.1	34.0	0.74	2.32	54.0	65.5	17.4
55	10.8	46.1	34.0	0.74	2.31	54.0	65.0	18.9
55	11.8	46.2	34.1	0.74	2.30	54.0	64.2	21.9
68	6.4	44.0	33.3	0.76	2.75	53.4	84.8	7.0
68	7.8	44.3	33.5	0.76	2.68	53.4	81.6	10.1
68	8.8	44.4	33.5	0.76	2.65	53.4	80.1	12.5
68	9.8	44.5	33.6	0.76	2.63	53.4	78.9	15.0
68	10.3	44.5	33.6	0.76	2.62	53.4	78.4	16.3
68	10.8	44.5	33.7	0.76	2.61	53.4	77.9	17.7
68	11.8	44.6	33.7	0.76	2.59	53.4	77.1	20.6
75	6.4	42.7	32.8	0.77	2.95	52.8	91.6	6.8
75	7.8	42.9	32.9	0.77	2.87	52.8	88.5	9.9
75	8.8	43.1	33.1	0.77	2.84	52.8	87.0	12.1
75	9.8	43.2	33.1	0.77	2.81	52.8	85.8	14.6
75	10.3	43.2	33.1	0.77	2.80	52.8	85.3	15.9
75	10.8	43.2	33.2	0.77	2.79	52.8	84.8	17.2
75	11.8	43.3	33.2	0.77	2.78	52.8	84.0	20.1
86	6.4	40.8	32.2	0.79	3.29	52.0	102.3	6.5
86	7.8	41.0	32.4	0.79	3.20	52.0	99.3	9.5
86	8.8	41.1	32.4	0.79	3.17	51.9	97.8	11.6
86	9.8	41.2	32.5	0.79	3.14	51.9	96.6	14.0
86	10.3	41.3	32.5	0.79	3.12	51.9	96.1	15.2
86	10.8	41.3	32.6	0.79	3.11	51.9	95.6	16.5
86	11.8	41.3	32.6	0.79	3.09	51.9	94.8	19.2
95	6.4	38.9	31.4	0.81	3.62	51.3	111.1	6.2
95	7.8	39.1	31.6	0.81	3.54	51.2	108.1	8.9
95	8.8	39.2	31.7	0.81	3.50	51.2	106.6	11.0
95	9.8	39.3	31.7	0.81	3.46	51.1	105.4	13.3
95	10.3	39.3	31.8	0.81	3.45	51.1	104.9	14.4
95	10.8	39.4	31.8	0.81	3.44	51.1	104.5	15.7
95	11.8	39.4	31.8	0.81	3.42	51.1	103.7	18.3
105	6.4	36.7	30.5	0.83	4.06	50.5	120.9	6.0
105	7.8	36.9	30.7	0.83	3.96	50.4	117.9	8.7
105	8.8	37.0	30.8	0.83	3.91	50.4	116.4	10.7
105	9.8	37.1	30.9	0.83	3.88	50.3	115.3	12.9
105	10.3	37.1	30.9	0.83	3.86	50.3	114.8	14.1
105	10.8	37.1	30.9	0.83	3.85	50.3	114.3	15.3
105	11.8	37.2	31.0	0.83	3.83	50.2	113.5	17.8

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Table 73. GEH042 cooling performance (continued)

EWT	GPM	Total Mbtuh	Sen Mbtuh	SHR	Power kW	Reject Mbtuh	LWT	Feet Head
110	6.4	35.5	30.1	0.85	4.30	50.2	125.8	5.9
110	7.8	35.7	30.3	0.85	4.20	50.1	122.8	8.6
110	8.8	35.8	30.3	0.85	4.15	50.0	121.3	10.6
110	9.8	35.9	30.4	0.85	4.11	49.9	120.2	12.7
110	10.3	35.9	30.4	0.85	4.10	49.9	119.7	13.9
110	10.8	35.9	30.4	0.85	4.08	49.9	119.3	15.1
110	11.8	36.0	30.5	0.85	4.06	49.8	118.5	17.5

Notes: Cooling performance data is tabulated at 80.6°F DB/66.2°F WB entering air at ARI/ISO 13256-1 rated cfm. For ARI/ISO 13256-1 certified ratings, see Table 17, p. 27. See Performance correction tables to correct performance at conditions other than those tabulated. Data shown is for unit performance only. Interpolation is permissible. Extrapolation is not. Rated GPM: 9.3 Minimum cfm 960; Rated cfm 1200; Maximum cfm 1440

Table 74. GEH042 heating performance

EWT	GPM	Htg Cap Mbtuh	Absorb Mbtuh	Power kW	LWT	Feet Head
25	6.4	30.6	20.8	2.89	18.5	8.6
25	7.8	31.1	21.2	2.89	19.6	12.4
25	8.8	31.4	21.5	2.90	20.1	15.2
25	9.8	31.4	21.5	2.90	20.6	18.2
25	10.3	31.5	21.6	2.90	20.8	19.8
25	10.8	31.7	21.8	2.90	21.0	21.5
25	11.8	31.9	21.9	2.91	21.3	24.9
32	6.4	33.6	23.6	2.92	24.6	8.4
32	7.8	34.1	24.1	2.92	25.8	12.2
32	8.8	34.3	24.4	2.93	26.5	14.9
32	9.8	34.6	24.6	2.93	27.0	17.9
32	10.3	34.6	24.6	2.92	27.2	19.4
32	10.8	34.7	24.7	2.93	27.4	21.0
32	11.8	34.8	24.8	2.93	27.8	24.4
45	6.4	39.4	29.1	3.02	35.9	7.8
45	7.8	40.0	29.7	3.02	37.4	11.3
45	8.8	40.4	30.0	3.02	38.2	13.8
45	9.8	40.7	30.4	3.03	38.8	16.6
45	10.3	40.7	30.4	3.03	39.1	18.1
45	10.8	40.9	30.5	3.03	39.3	19.6
45	11.8	41.0	30.7	3.04	39.8	22.9
55	6.4	44.5	33.8	3.11	44.4	7.5
55	7.8	45.2	34.6	3.12	46.2	10.8
55	8.8	45.6	34.9	3.13	47.1	13.3
55	9.8	45.9	35.2	3.14	47.8	16.0
55	10.3	46.1	35.4	3.14	48.1	17.4
55	10.8	46.2	35.5	3.14	48.4	18.9
55	11.8	46.4	35.7	3.15	48.9	21.9
68	6.4	50.2	39.1	3.27	55.7	7.0
68	7.8	51.2	40.0	3.29	57.8	10.1
68	8.8	51.9	40.6	3.32	58.8	12.5
68	9.8	52.3	41.0	3.33	59.6	15.0
68	10.3	52.5	41.1	3.34	60.0	16.3
68	10.8	52.7	41.3	3.34	60.3	17.7

Table 74. GEH042 heating performance (continued)

EWT	GPM	Htg Cap Mbtuh	Absorb Mbtuh	Power kW	LWT	Feet Head
68	11.8	53.0	41.6	3.34	60.9	20.6
75	6.4	54.0	42.5	3.38	61.7	6.8
75	7.8	55.3	43.6	3.42	63.9	9.9
75	8.8	56.0	44.2	3.44	65.0	12.1
75	9.8	56.7	44.8	3.47	65.8	14.6
75	10.3	56.9	45.0	3.48	66.2	15.9
75	10.8	57.1	45.2	3.48	66.6	17.2
75	11.8	57.3	45.4	3.49	67.3	20.1
86	6.4	60.6	48.2	3.63	70.9	6.5
86	7.8	62.1	49.5	3.68	73.4	9.5
86	8.8	62.7	50.1	3.71	74.6	11.6
86	9.8	63.4	50.6	3.74	75.7	14.0
86	10.3	63.7	50.9	3.75	76.1	15.2
86	10.8	63.9	51.1	3.76	76.5	16.5
86	11.8	64.2	51.3	3.78	77.3	19.2

Notes: Heating performance data is tabulated at 68°F DB entering air at ARI/ISO 13256-1 rated cfm. For ARI/ISO 13256-1 certified ratings, see Table 17, p. 27. See Performance correction tables to correct performance at conditions other than those tabulated. Data shown is for unit performance only. Interpolation is permissible. Extrapolation is not. Rated GPM: 9.3 Minimum cfm 960; Rated cfm 1200; Maximum cfm 1440

Table 75. GEH042 fan correction factors

Entering cfm	Cooling Capacity	Sensible Capacity	Cooling Input Watts	Heating Capacity	Heating Input Watts
1064	0.955	0.873	0.996	0.989	1.070
1131	0.968	0.906	0.997	0.992	1.049
1197	0.980	0.936	0.998	0.996	1.031
1264	0.991	0.969	0.999	0.998	1.014
1330	1.000	1.000	1.000	1.000	1.000
1463	1.017	1.063	1.002	1.003	0.972
1530	1.025	1.093	1.003	1.005	0.961
1596	1.033	1.120	1.004	1.005	0.950

Table 76. GEH042 correction factors for variation in entering air temperature

Cooling Entering Air WB°F	Cooling Capacity	Cooling Input Watts	Sensible vs. Entering Dry Bulb Multipliers					Heating Entering Air DB°F	Heating Capacity	Heating Input Watts
			65.6	70.6	75.6	80.6	85.6			
49.4	0.926	0.997	0.970	1.037	1.105	*	*	53.0	1.024	0.867
56.3	0.927	0.997	0.795	1.008	1.107	*	*	58.0	1.013	0.906
60.3	0.928	0.997	0.601	0.832	1.051	*	*	63.0	1.009	0.952
63.2	0.954	0.997	0.459	0.688	0.919	1.136	*	68.0	1.000	1.000
66.2	1.000	1.000	—	0.538	0.769	1.000	1.216	73.0	0.990	1.047
72.1	1.098	1.009	—	—	0.467	0.699	0.931	78.0	0.983	1.099
77.1	1.176	0.999	—	—	—	0.382	0.629	83.0	0.975	1.154

Note: * = Sensible equals total capacity

Table 77. GEV042 cooling performance

EWT	GPM	Total Mbtuh	Sen Mbtuh	SHR	Power kW	Reject Mbtuh	LWT	Feet Head
45	6.4	46.7	33.7	0.72	2.22	54.3	62.0	7.3
45	7.8	46.9	33.9	0.72	2.16	54.3	58.9	10.6
45	8.8	47.1	34.0	0.72	2.14	54.4	57.3	13.1
45	9.8	47.2	34.0	0.72	2.12	54.4	56.1	15.7
45	10.3	47.2	34.1	0.72	2.11	54.4	55.6	17.1
45	10.8	47.3	34.1	0.72	2.10	54.4	55.1	18.5
45	11.8	47.3	34.1	0.72	2.09	54.4	54.3	21.5
55	6.4	45.2	33.1	0.73	2.44	53.5	71.8	7.0
55	7.8	45.4	33.3	0.73	2.38	53.5	68.7	10.2
55	8.8	45.5	33.3	0.73	2.35	53.5	67.1	12.5
55	9.8	45.6	33.4	0.73	2.33	53.6	65.9	15.1
55	10.3	45.6	33.4	0.73	2.32	53.6	65.4	16.4
55	10.8	45.7	33.5	0.73	2.31	53.6	64.9	17.8
55	11.8	45.8	33.5	0.73	2.29	53.6	64.1	20.7
68	6.4	43.3	32.6	0.75	2.75	52.7	84.6	6.6
68	7.8	43.6	32.8	0.75	2.67	52.7	81.4	9.6
68	8.8	43.7	32.9	0.75	2.64	52.7	80.0	11.9
68	9.8	43.8	33.0	0.75	2.62	52.7	78.8	14.2
68	10.3	43.9	33.0	0.75	2.61	52.8	78.3	15.5
68	10.8	43.9	33.0	0.75	2.60	52.8	77.8	16.8
68	11.8	44.0	33.1	0.75	2.58	52.8	77.0	19.6
75	6.4	42.1	32.2	0.76	2.94	52.2	91.4	6.5
75	7.8	42.4	32.3	0.76	2.87	52.2	88.3	9.4
75	8.8	42.5	32.4	0.76	2.84	52.2	86.8	11.5
75	9.8	42.6	32.5	0.76	2.81	52.2	85.7	13.9
75	10.3	42.6	32.5	0.76	2.80	52.2	85.1	15.1
75	10.8	42.7	32.6	0.76	2.79	52.2	84.7	16.4
75	11.8	42.7	32.6	0.76	2.77	52.2	83.9	19.1
86	6.4	39.7	30.9	0.78	3.26	50.8	102.0	6.2
86	7.8	40.0	31.1	0.78	3.18	50.8	99.0	9.0
86	8.8	40.1	31.2	0.78	3.15	50.8	97.5	11.1
86	9.8	40.2	31.3	0.78	3.12	50.8	96.4	13.3
86	10.3	40.2	31.3	0.78	3.11	50.8	95.9	14.5
86	10.8	40.2	31.4	0.78	3.10	50.8	95.4	15.7
86	11.8	40.3	31.4	0.78	3.08	50.8	94.6	18.2
95	6.4	38.0	30.3	0.80	3.60	50.3	110.8	5.9
95	7.8	38.2	30.5	0.80	3.51	50.2	107.8	8.5
95	8.8	38.4	30.6	0.80	3.47	50.2	106.4	10.5
95	9.8	38.4	30.7	0.80	3.44	50.2	105.2	12.6
95	10.3	38.5	30.7	0.80	3.43	50.2	104.8	13.8
95	10.8	38.5	30.7	0.80	3.42	50.2	104.3	14.9
95	11.8	38.6	30.8	0.80	3.39	50.2	103.5	17.4

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Table 77. GEV042 cooling performance (continued)

EWT	GPM	Total Mbtuh	Sen Mbtuh	SHR	Power kW	Reject Mbtuh	LWT	Feet Head
105	6.4	36.0	29.5	0.82	4.02	49.7	120.6	5.7
105	7.8	36.2	29.7	0.82	3.93	49.6	117.6	8.3
105	8.8	36.3	29.8	0.82	3.88	49.5	116.2	10.2
105	9.8	36.4	29.9	0.82	3.85	49.5	115.1	12.3
105	10.3	36.4	29.9	0.82	3.83	49.5	114.6	13.4
105	10.8	36.4	29.9	0.82	3.82	49.5	114.2	14.5
105	11.8	36.5	30.0	0.82	3.80	49.5	113.4	16.9
110	6.4	34.9	29.1	0.84	4.25	49.4	125.5	5.7
110	7.8	35.1	29.3	0.84	4.16	49.3	122.6	8.2
110	8.8	35.2	29.4	0.84	4.11	49.2	121.2	10.1
110	9.8	35.3	29.5	0.84	4.07	49.2	120.0	12.1
110	10.3	35.3	29.5	0.84	4.06	49.2	119.6	13.2
110	10.8	35.4	29.6	0.84	4.04	49.2	119.1	14.3
110	11.8	35.4	29.6	0.84	4.02	49.1	118.4	16.7

Notes: Cooling performance data is tabulated at 80.6°F DB/66.2°F WB entering air at ARI/ISO 13256-1 rated cfm. For ARI/ISO 13256-1 certified ratings, see Table 18, p. 27. See Performance correction tables to correct performance at conditions other than those tabulated. Data shown is for unit performance only. Interpolation is permissible. Extrapolation is not. Rated GPM: 9.8 Minimum cfm 1064; Rated cfm 1330; Maximum cfm 1596

Table 78. GEV042 heating performance

EWT	GPM	Htg Cap Mbtuh	Absorb Mbtuh	Power kW	LWT	Feet Head
25	6.4	30.4	20.8	2.82	18.5	8.0
25	7.8	30.9	21.2	2.82	19.6	11.7
25	8.8	31.1	21.4	2.83	20.1	14.4
25	9.8	31.2	21.6	2.83	20.6	17.2
25	10.3	31.3	21.6	2.83	20.8	18.7
25	10.8	31.3	21.7	2.83	21.0	20.2
25	11.8	31.4	21.8	2.84	21.3	23.4
32	6.4	33.8	24.0	2.89	24.5	7.8
32	7.8	34.4	24.5	2.90	25.7	11.4
32	8.8	34.6	24.7	2.90	26.4	14.0
32	9.8	34.9	25.0	2.90	26.9	16.8
32	10.3	34.9	25.0	2.90	27.1	18.3
32	10.8	35.0	25.1	2.90	27.3	19.8
32	11.8	35.1	25.2	2.91	27.7	22.9
45	6.4	39.8	29.6	3.01	35.7	7.3
45	7.8	40.5	30.2	3.02	37.3	10.6
45	8.8	40.8	30.5	3.02	38.1	13.1
45	9.8	41.0	30.7	3.02	38.7	15.7
45	10.3	41.1	30.8	3.02	39.0	17.1
45	10.8	41.2	30.9	3.03	39.3	18.5
45	11.8	41.5	31.1	3.04	39.7	21.5
55	6.4	44.8	34.2	3.11	44.3	7.0
55	7.8	45.6	34.9	3.12	46.1	10.2

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Table 78. GEV042 heating performance (continued)

EWT	GPM	Htg Cap Mbtuh	Absorb Mbtuh	Power kW	LWT	Feet Head
55	8.8	46.0	35.3	3.13	47.0	12.5
55	9.8	46.3	35.6	3.14	47.7	15.1
55	10.3	46.4	35.7	3.14	48.1	16.4
55	10.8	46.5	35.8	3.14	48.4	17.8
55	11.8	46.7	36.0	3.15	48.9	20.7
68	6.4	50.7	39.5	3.28	55.6	6.6
68	7.8	51.7	40.5	3.30	57.7	9.6
68	8.8	52.1	40.8	3.31	58.7	11.9
68	9.8	52.7	41.4	3.34	59.6	14.2
68	10.3	52.9	41.5	3.34	59.9	15.5
68	10.8	53.1	41.7	3.34	60.3	16.8
68	11.8	53.3	41.9	3.34	60.9	19.6
75	6.4	54.5	42.9	3.39	61.5	6.5
75	7.8	55.7	44.0	3.43	63.8	9.4
75	8.8	56.4	44.6	3.45	64.9	11.5
75	9.8	57.0	45.2	3.47	65.8	13.9
75	10.3	57.3	45.4	3.48	66.2	15.1
75	10.8	57.5	45.6	3.49	66.5	16.4
75	11.8	57.7	45.8	3.50	67.2	19.1
86	6.4	61.1	48.7	3.64	70.7	6.2
86	7.8	62.6	50.0	3.70	73.2	9.0
86	8.8	63.2	50.5	3.72	74.6	11.1
86	9.8	63.9	51.0	3.75	75.6	13.3
86	10.3	64.1	51.3	3.76	76.0	14.5
86	10.8	64.3	51.4	3.77	76.5	15.7
86	11.8	64.7	51.8	3.79	77.2	18.2

Notes: Heating performance data is tabulated at 68°F DB entering air at ARI/ISO 13256-1 rated cfm. For ARI/ISO 13256-1 certified ratings, see Table 18, p. 27 See Performance correction tables to correct performance at conditions other than those tabulated. Data shown is for unit performance only. Interpolation is permissible. Extrapolation is not. Rated GPM: 9.8 Minimum cfm 1064; Rated cfm 1330; Maximum cfm 1596

Table 79. GEV042 fan correction factors

Entering cfm	Cooling Capacity	Sensible Capacity	Cooling Input Watts	Heating Capacity	Heating Input Watts
1064	0.956	0.874	0.997	0.990	1.069
1131	0.969	0.907	0.998	0.993	1.049
1197	0.981	0.939	0.999	0.995	1.030
1264	0.991	0.969	0.999	0.997	1.013
1330	1.000	1.000	1.000	1.000	1.000
1463	1.017	1.062	1.001	1.004	0.973
1530	1.024	1.093	1.002	1.005	0.961
1596	1.032	1.123	1.003	1.007	0.952

Table 80. GEV042 correction factors for variation in entering air temperature

Cooling Entering Air WB°F	Cooling Capacity	Cooling Input Watts	Sensible vs. Entering Dry Bulb Multipliers					Heating Entering Air DB°F	Heating Capacity	Heating Input Watts
			65.6	70.6	75.6	80.6	85.6			
49.4	0.927	0.998	0.990	1.056	1.123	*	*	53.0	1.023	0.868
56.3	0.928	0.998	0.800	1.026	1.124	*	*	58.0	1.014	0.907
60.3	0.929	0.999	0.600	0.834	1.065	*	*	63.0	1.008	0.953
63.2	0.955	0.997	0.450	0.686	0.921	1.150	*	68.0	1.000	1.000
66.2	1.000	1.000	—	0.529	0.763	1.000	1.229	73.0	0.988	1.045
72.1	1.096	1.005	—	—	0.446	0.686	0.924	78.0	0.983	1.097
77.1	1.182	1.018	—	—	—	0.407	0.649	83.0	0.975	1.151

Note: * = Sensible equals total capacity

Table 81. GEH048 cooling performance

EWT	GPM	Total Mbtuh	Sen Mbtuh	SHR	Power kW	Reject Mbtuh	LWT	Feet Head
45	7.3	56.7	40.8	0.72	2.58	65.5	63.0	4.7
45	9.0	57.2	41.2	0.72	2.47	65.7	59.7	6.8
45	10.1	57.5	41.4	0.72	2.42	65.8	58.0	8.4
45	11.2	57.7	41.6	0.72	2.38	65.8	56.8	10.1
45	11.8	57.8	41.6	0.72	2.36	65.8	56.2	11.0
45	12.3	57.9	41.7	0.72	2.34	65.9	55.7	12.0
45	13.4	58.1	41.8	0.72	2.31	66.0	54.8	14.0
55	7.3	54.8	40.0	0.73	2.92	64.8	72.8	4.6
55	9.0	55.4	40.4	0.73	2.81	65.0	69.5	6.6
55	10.1	55.5	40.6	0.73	2.76	65.0	67.9	8.1
55	11.2	55.8	40.7	0.73	2.72	65.0	66.6	9.8
55	11.8	55.9	40.8	0.73	2.70	65.1	66.1	10.6
55	12.3	56.0	40.9	0.73	2.69	65.1	65.6	11.6
55	13.4	56.1	40.9	0.73	2.66	65.1	64.7	13.5
68	7.3	52.5	39.4	0.75	3.32	63.9	85.5	4.4
68	9.0	53.1	39.8	0.75	3.22	64.1	82.3	6.3
68	10.1	53.3	40.0	0.75	3.18	64.1	80.7	7.8
68	11.2	53.5	40.1	0.75	3.13	64.2	79.5	9.4
68	11.8	53.6	40.2	0.75	3.11	64.2	78.9	10.2
68	12.3	53.7	40.2	0.75	3.09	64.2	78.4	11.1
68	13.4	53.8	40.4	0.75	3.07	64.3	77.6	12.9
75	7.3	51.0	38.9	0.76	3.58	63.2	92.4	4.3
75	9.0	51.6	39.3	0.76	3.47	63.4	89.2	6.2
75	10.1	51.8	39.5	0.76	3.43	63.5	87.6	7.6
75	11.2	52.0	39.7	0.76	3.39	63.5	86.3	9.1
75	11.8	52.1	39.7	0.76	3.37	63.6	85.8	10.0
75	12.3	52.1	39.8	0.76	3.35	63.6	85.3	10.8
75	13.4	52.3	39.9	0.76	3.33	63.6	84.5	12.6
86	7.3	48.3	37.8	0.78	3.99	61.9	103.0	4.2

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Table 81. GEH048 cooling performance (continued)

EWT	GPM	Total Mbtuh	Sen Mbtuh	SHR	Power kW	Reject Mbtuh	LWT	Feet Head
86	9.0	48.8	38.1	0.78	3.87	62.0	99.8	6.0
86	10.1	49.1	38.3	0.78	3.82	62.1	98.3	7.4
86	11.2	49.3	38.5	0.78	3.78	62.2	97.1	8.9
86	11.8	49.4	38.6	0.78	3.76	62.2	96.6	9.7
86	12.3	49.4	38.6	0.78	3.75	62.2	96.1	10.5
86	13.4	49.6	38.7	0.78	3.72	62.2	95.3	12.2
95	7.3	46.1	36.8	0.80	4.38	61.0	111.8	4.0
95	9.0	46.6	37.2	0.80	4.26	61.1	108.6	5.8
95	10.1	46.8	37.4	0.80	4.21	61.2	107.1	7.1
95	11.2	47.0	37.6	0.80	4.17	61.2	105.9	8.6
95	11.8	47.1	37.6	0.80	4.15	61.2	105.4	9.3
95	12.3	47.2	37.7	0.80	4.13	61.3	105.0	10.1
95	13.4	47.3	37.8	0.80	4.10	61.3	104.1	11.8
105	7.3	43.3	35.9	0.83	4.87	60.0	121.5	3.9
105	9.0	43.8	36.3	0.83	4.75	60.1	118.4	5.6
105	10.1	44.1	36.5	0.83	4.69	60.1	116.9	6.9
105	11.2	44.3	36.6	0.83	4.64	60.1	115.7	8.3
105	11.8	44.3	36.7	0.83	4.62	60.1	115.2	9.1
105	12.3	44.4	36.8	0.83	4.61	60.1	114.8	9.8
105	13.4	44.6	36.9	0.83	4.58	60.2	114.0	11.5
110	7.3	41.9	35.3	0.84	5.14	59.4	126.3	3.8
110	9.0	42.4	35.7	0.84	5.01	59.5	123.3	5.5
110	10.1	42.6	35.9	0.84	4.95	59.5	121.8	6.8
110	11.2	42.8	36.1	0.84	4.91	59.6	120.6	8.2
110	11.8	42.9	36.1	0.84	4.89	59.6	120.1	8.9
110	12.3	43.0	36.2	0.84	4.87	59.6	119.7	9.7
110	13.4	42.4	35.8	0.84	4.90	59.2	118.8	11.3

Notes: Cooling performance data is tabulated at 80.6°F DB/66.2°F WB entering air at ARI/ISO 13256-1 rated cfm. For ARI/ISO 13256-1 certified ratings, see Table 17, p. 27. See Performance correction tables to correct performance at conditions other than those tabulated. Data shown is for unit performance only. Interpolation is permissible. Extrapolation is not. Rated GPM: 11.2 Minimum cfm 1216; Rated cfm 1520; Maximum cfm 1824

Table 82. GEH048 heating performance

EWT	GPM	Htg Cap Mbtuh	Absorb Mbtuh	Power kW	LWT	Feet Head
25	7.3	35.7	24.4	3.31	18.3	5.1
25	9.0	36.4	25.0	3.32	19.4	7.3
25	10.1	36.6	25.3	3.32	20.0	9.1
25	11.2	36.9	25.5	3.32	20.4	10.9
25	11.8	37.1	25.7	3.33	20.6	11.9
25	12.3	37.3	25.9	3.33	20.8	13.0
25	13.4	37.3	26.0	3.33	21.1	15.1
32	7.3	39.1	27.7	3.35	24.4	5.0
32	9.0	39.8	28.3	3.37	25.7	7.2
32	10.1	40.3	28.8	3.38	26.3	8.9

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Table 82. GEH048 heating performance (continued)

EWT	GPM	Htg Cap Mbtuh	Absorb Mbtuh	Power kW	LWT	Feet Head
32	11.2	40.8	29.2	3.39	26.8	10.7
32	11.8	40.8	29.2	3.38	27.0	11.7
32	12.3	41.0	29.4	3.39	27.2	12.7
32	13.4	41.1	29.6	3.39	27.6	14.8
45	7.3	45.9	34.0	3.48	35.7	4.7
45	9.0	46.8	34.9	3.50	37.2	6.8
45	10.1	47.1	35.2	3.50	38.0	8.4
45	11.2	47.6	35.6	3.51	38.6	10.1
45	11.8	47.7	35.7	3.51	38.9	11.0
45	12.3	47.9	35.9	3.52	39.2	12.0
45	13.4	48.1	36.1	3.52	39.6	14.0
55	7.3	51.6	39.4	3.58	44.2	4.6
55	9.0	52.7	40.4	3.60	46.0	6.6
55	10.1	53.4	41.0	3.61	46.9	8.1
55	11.2	53.6	41.3	3.62	47.6	9.8
55	11.8	53.9	41.6	3.62	47.9	10.6
55	12.3	54.1	41.7	3.62	48.2	11.6
55	13.4	54.4	42.0	3.63	48.7	13.5
68	7.3	57.5	44.9	3.72	55.7	4.4
68	9.0	59.0	46.2	3.74	57.7	6.3
68	10.1	59.8	46.9	3.76	58.7	7.8
68	11.2	60.5	47.7	3.78	59.5	9.4
68	11.8	60.8	47.9	3.77	59.8	10.2
68	12.3	61.1	48.2	3.79	60.2	11.1
68	13.4	61.3	48.4	3.78	60.8	12.9
75	7.3	61.8	48.8	3.79	61.6	4.3
75	9.0	63.5	50.4	3.82	63.7	6.2
75	10.1	64.3	51.2	3.84	64.8	7.6
75	11.2	64.9	51.8	3.85	65.8	9.1
75	11.8	65.2	52.0	3.85	66.1	10.0
75	12.3	65.5	52.3	3.86	66.5	10.8
75	13.4	66.1	52.8	3.87	67.1	12.6
86	7.3	68.9	55.5	3.93	70.8	4.2
86	9.0	70.6	57.0	3.96	73.3	6.0
86	10.1	71.6	58.0	3.99	74.5	7.4
86	11.2	72.2	58.6	3.98	75.5	8.9
86	11.8	72.5	58.9	3.99	76.0	9.7
86	12.3	72.9	59.2	4.00	76.4	10.5
86	13.4	73.5	59.8	4.01	77.1	12.2

Notes: Heating performance data is tabulated at 68°F DB entering air at ARI/ISO 13256-1 rated cfm. For ARI/ISO 13256-1 certified ratings, see Table 17, p. 27. See Performance correction tables to correct performance at conditions other than those tabulated. Data shown is for unit performance only. Interpolation is permissible. Extrapolation is not. Rated GPM: 11.2 Minimum cfm 1216; Rated cfm 1520; Maximum cfm 1824

Table 83. GEH048 fan correction factors

Entering cfm	Cooling Capacity	Sensible Capacity	Cooling Input Watts	Heating Capacity	Heating Input Watts
1216	0.958	0.877	1.005	0.982	1.067
1292	0.970	0.908	1.004	0.986	1.046
1368	0.981	0.937	1.002	0.990	1.028
1444	0.991	0.969	1.001	0.996	1.014
1520	1.000	1.000	1.000	1.000	1.000
1672	1.016	1.060	0.999	1.007	0.974
1748	1.023	1.088	0.999	1.004	0.961
1824	1.029	1.118	0.998	1.007	0.951

Table 84. GEH048 correction factors for variation in entering air temperature

Cooling Entering Air WB°F	Cooling Capacity	Cooling Input Watts	Sensible vs. Entering Dry Bulb Multipliers					Heating Entering Air DB°F	Heating Capacity	Heating Input Watts
			65.6	70.6	75.6	80.6	85.6			
49.4	0.937	1.011	1.012	1.074	1.137	*	*	53.0	1.035	0.849
56.3	0.937	1.010	0.812	1.033	1.138	*	*	58.0	1.023	0.897
60.3	0.938	1.011	0.621	0.843	1.068	*	*	63.0	1.007	0.943
63.2	0.959	1.008	0.480	0.702	0.925	1.146	*	68.0	1.000	1.000
66.2	1.000	1.000	—	0.554	0.775	1.000	1.219	73.0	0.983	1.050
72.1	1.078	0.982	—	—	0.475	0.701	0.924	78.0	0.973	1.107
77.1	1.149	0.972	—	—	—	0.442	0.666	83.0	0.961	1.165

Note: * = Sensible equals total capacity

Table 85. GEV048 cooling performance

EWT	GPM	Total Mbtuh	Sen Mbtuh	SHR	Power kW	Reject Mbtuh	LWT	Feet Head
45	7.3	56.4	40.3	0.72	2.60	65.2	62.9	8.3
45	9.0	56.9	40.7	0.72	2.49	65.4	59.6	4.9
45	10.1	57.1	40.9	0.72	2.44	65.4	58.0	6.4
45	11.2	57.3	41.0	0.72	2.40	65.5	56.7	7.8
45	11.8	57.4	41.0	0.72	2.39	65.5	56.1	8.9
45	12.3	57.4	41.1	0.72	2.37	65.5	55.6	9.7
45	13.4	57.6	41.2	0.72	2.34	65.6	54.8	11.0
55	7.3	54.6	39.6	0.73	2.92	64.6	72.7	7.9
55	9.0	55.1	40.0	0.73	2.82	64.7	69.4	4.7
55	10.1	55.3	40.1	0.73	2.78	64.8	67.9	6.2
55	11.2	55.5	40.3	0.73	2.74	64.8	66.6	7.5
55	11.8	55.6	40.3	0.73	2.72	64.9	66.0	8.6
55	12.3	55.6	40.4	0.73	2.71	64.9	65.5	9.4
55	13.4	55.8	40.5	0.73	2.68	64.9	64.7	10.6
68	7.3	52.2	39.1	0.75	3.28	63.3	85.4	7.7
68	9.0	52.6	39.5	0.75	3.17	63.5	82.2	4.5
68	10.1	52.9	39.7	0.75	3.13	63.6	80.6	6.0

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Table 85. GEV048 cooling performance (continued)

EWT	GPM	Total Mbtuh	Sen Mbtuh	SHR	Power kW	Reject Mbtuh	LWT	Feet Head
68	11.2	53.1	39.8	0.75	3.09	63.6	79.4	7.3
68	11.8	53.2	39.9	0.75	3.07	63.7	78.8	8.3
68	12.3	53.3	39.9	0.75	3.06	63.7	78.3	9.0
68	13.4	53.4	40.0	0.75	3.03	63.7	77.5	10.2
75	7.3	50.7	38.5	0.76	3.52	62.7	92.2	7.4
75	9.0	51.2	38.9	0.76	3.43	62.9	89.0	4.4
75	10.1	51.4	39.1	0.76	3.38	63.0	87.5	5.8
75	11.2	51.6	39.2	0.76	3.34	63.0	86.3	7.1
75	11.8	51.7	39.3	0.76	3.32	63.1	85.7	8.1
75	12.3	51.8	39.4	0.76	3.31	63.1	85.2	8.8
75	13.4	51.9	39.5	0.76	3.28	63.1	84.4	9.9
86	7.3	48.4	37.7	0.78	4.00	62.0	103.0	7.1
86	9.0	48.9	38.1	0.78	3.88	62.1	99.9	4.2
86	10.1	49.1	38.3	0.78	3.83	62.2	98.3	5.6
86	11.2	49.3	38.4	0.78	3.79	62.2	97.1	6.8
86	11.8	49.4	38.5	0.78	3.77	62.3	96.6	7.7
86	12.3	49.5	38.6	0.78	3.76	62.3	96.1	8.4
86	13.4	49.6	38.7	0.78	3.73	62.3	95.3	9.5
95	7.3	46.2	36.9	0.80	4.38	61.1	111.8	3.3
95	9.0	46.6	37.3	0.80	4.27	61.2	108.7	4.8
95	10.1	46.9	37.5	0.80	4.22	61.3	107.2	5.9
95	11.2	47.1	37.6	0.80	4.17	61.3	105.9	7.1
95	11.8	47.2	37.7	0.80	4.16	61.3	105.4	7.7
95	12.3	47.2	37.8	0.80	4.14	61.4	105.0	8.4
95	13.4	47.4	37.9	0.80	4.11	61.4	104.1	9.8
105	7.3	43.5	35.9	0.83	4.87	60.1	121.5	3.2
105	9.0	43.9	36.3	0.83	4.75	60.2	118.4	4.7
105	10.1	44.2	36.5	0.83	4.69	60.2	116.9	5.7
105	11.2	44.4	36.6	0.83	4.65	60.3	115.8	6.9
105	11.8	44.5	36.7	0.83	4.63	60.3	115.2	7.5
105	12.3	44.5	36.8	0.83	4.61	60.3	114.8	8.2
105	13.4	44.7	36.9	0.83	4.58	60.3	114.0	9.5
110	7.3	42.1	35.4	0.84	5.14	59.6	126.4	3.2
110	9.0	42.5	35.8	0.84	5.02	59.6	123.3	4.6
110	10.1	42.8	36.0	0.84	4.96	59.7	121.8	5.6
110	11.2	43.0	36.1	0.84	4.92	59.7	120.7	6.8
110	11.8	43.0	36.2	0.84	4.88	59.7	120.2	7.4
110	12.3	43.1	36.2	0.84	4.87	59.7	119.7	8.0
110	13.4	43.2	36.4	0.84	4.84	59.7	118.9	9.4

Notes: Cooling performance data is tabulated at 80.6°F DB/66.2°F WB entering air at ARI/ISO 13256-1 rated cfm. For ARI/ISO 13256-1 certified ratings, see Table 18, p. 27. See Performance correction tables to correct performance at conditions other than those tabulated. Data shown is for unit performance only. Interpolation is permissible. Extrapolation is not. Rated GPM: 11.2 Minimum cfm 1216; Rated cfm 1520; Maximum cfm 1824

Table 86. GEV048 heating performance

EWT	GPM	Htg Cap Mbtuh	Absorb Mbtuh	Power kW	LWT	Feet Head
25	7.3	32.1	21.1	3.23	19.2	5.0
25	9.0	32.8	21.8	3.24	20.1	4.4
25	10.1	33.2	22.1	3.25	20.6	6.2
25	11.2	33.4	22.3	3.25	21.0	7.7
25	11.8	33.5	22.4	3.26	21.2	9.3
25	12.3	33.7	22.5	3.26	21.3	10.1
25	13.4	33.8	22.7	3.26	21.6	11.0
32	7.3	35.4	24.2	3.28	25.3	13.0
32	9.0	36.0	24.8	3.29	26.5	4.3
32	10.1	36.2	25.0	3.29	27.0	6.1
32	11.2	36.6	25.3	3.30	27.5	7.5
32	11.8	36.7	25.4	3.30	27.7	9.0
32	12.3	36.9	25.6	3.30	27.8	9.9
32	13.4	36.9	25.6	3.30	28.2	10.8
45	7.3	40.9	29.4	3.38	36.9	8.3
45	9.0	41.6	30.1	3.39	38.3	4.9
45	10.1	41.9	30.3	3.39	39.0	6.4
45	11.2	42.2	30.6	3.40	39.5	7.8
45	11.8	42.3	30.7	3.40	39.8	8.9
45	12.3	42.4	30.8	3.40	40.0	9.7
45	13.4	42.6	31.0	3.41	40.4	11.0
55	7.3	46.2	34.4	3.46	45.6	7.9
55	9.0	46.9	35.1	3.47	47.2	4.7
55	10.1	47.3	35.4	3.48	48.0	6.2
55	11.2	47.7	35.8	3.49	48.6	7.5
55	11.8	47.8	35.9	3.49	48.9	8.6
55	12.3	48.0	36.1	3.49	49.1	9.4
55	13.4	48.1	36.2	3.49	49.6	10.6
68	7.3	52.3	40.1	3.59	57.0	7.7
68	9.0	53.2	40.9	3.61	58.9	4.5
68	10.1	53.7	41.4	3.62	59.8	6.0
68	11.2	54.1	41.8	3.62	60.5	7.3
68	11.8	54.2	41.8	3.62	60.9	8.3
68	12.3	54.4	42.0	3.63	61.2	9.0
68	13.4	54.6	42.2	3.63	61.7	10.2
75	7.3	56.3	43.8	3.66	63.0	7.4
75	9.0	57.4	44.8	3.68	65.0	4.4
75	10.1	57.9	45.3	3.69	66.0	5.8
75	11.2	58.3	45.7	3.70	66.8	7.1
75	11.8	58.7	46.0	3.71	67.2	8.1
75	12.3	58.7	46.1	3.71	67.5	8.8
75	13.4	59.0	46.3	3.71	68.1	9.9
86	7.3	62.8	50.0	3.76	72.3	7.1

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Table 86. GEV048 heating performance (continued)

EWT	GPM	Htg Cap Mbtuh	Absorb Mbtuh	Power kW	LWT	Feet Head
86	9.0	64.0	51.1	3.78	74.6	4.2
86	10.1	64.9	51.9	3.80	75.7	5.6
86	11.2	65.0	52.1	3.80	76.7	6.8
86	11.8	65.2	52.3	3.80	77.1	7.7
86	12.3	65.4	52.5	3.80	77.5	8.4
86	13.4	65.8	52.8	3.81	78.1	9.5

Notes: Heating performance data is tabulated at 68°F DB entering air at ARI/ISO 13256-1 rated cfm. For ARI/ISO 13256-1 certified ratings, see Table 18, p. 27. See Performance correction tables to correct performance at conditions other than those tabulated. Data shown is for unit performance only. Interpolation is permissible. Extrapolation is not. Rated GPM: 11.2 Minimum cfm 1216; Rated cfm 1520; Maximum cfm 1824

Table 87. GEV048 fan correction factors

Entering cfm	Cooling Capacity	Sensible Capacity	Cooling Input Watts	Heating Capacity	Heating Input Watts
1216	0.958	0.878	1.005	0.990	1.061
1292	0.970	0.909	1.002	0.994	1.044
1368	0.981	0.939	1.001	0.994	1.026
1444	0.991	0.970	1.001	0.997	1.012
1520	1.000	1.000	1.000	1.000	1.000
1672	1.016	1.061	0.999	1.003	0.978
1748	1.023	1.090	0.998	1.004	0.969
1824	1.030	1.121	0.998	1.006	0.960

Table 88. GEV048 correction factors for variation in entering air temperature

Cooling Entering Air WB°F	Cooling Capacity	Cooling Input Watts	Sensible vs. Entering Dry Bulb Multipliers					Heating Entering Air DB°F	Heating Capacity	Heating Input Watts
			65.6	70.6	75.6	80.6	85.6			
49.4	0.933	1.009	1.003	1.068	1.133	*	*	53.0	1.021	0.872
56.3	0.935	1.009	0.810	1.030	1.134	*	*	58.0	1.014	0.912
60.3	0.935	1.009	0.618	0.840	1.066	*	*	63.0	1.007	0.956
63.2	0.958	1.006	0.475	0.699	0.925	1.147	*	68.0	1.000	1.000
66.2	1.000	1.000	—	0.550	0.774	1.000	1.222	73.0	0.991	1.045
72.1	1.083	0.985	—	—	0.474	0.700	0.925	78.0	0.985	1.095
77.1	1.158	0.975	—	—	—	0.440	0.666	83.0	0.980	1.148

Note: * = Sensible equals total capacity

Table 89. GEH060 cooling performance

EWT	GPM	Total Mbtuh	Sen Mbtuh	SHR	Power kW	Reject Mbtuh	LWT	Feet Head
45	9.1	69.0	48.1	0.70	3.47	80.8	62.8	7.3
45	11.2	69.3	48.3	0.70	3.38	80.9	59.4	10.6
45	12.6	69.5	48.5	0.70	3.33	80.9	57.8	13.0
45	14.0	69.6	48.5	0.70	3.30	80.9	56.6	15.7
45	14.7	69.7	48.6	0.70	3.29	80.9	56.0	17.1
45	15.4	69.7	48.6	0.70	3.27	80.9	55.5	9.3

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Table 89. GEH060 cooling performance (continued)

EWT	GPM	Total Mbtuh	Sen Mbtuh	SHR	Power kW	Reject Mbtuh	LWT	Feet Head
45	16.8	69.8	48.7	0.70	3.25	80.9	54.6	10.8
55	9.1	65.9	46.9	0.71	3.76	78.7	72.3	7.1
55	11.2	66.2	47.2	0.71	3.66	78.7	69.1	10.2
55	12.6	66.5	47.3	0.71	3.62	78.8	67.5	12.6
55	14.0	66.6	47.4	0.71	3.58	78.8	66.3	15.1
55	14.7	66.7	47.5	0.71	3.56	78.8	65.7	16.5
55	15.4	66.7	47.5	0.71	3.55	78.8	65.2	17.9
55	16.8	66.8	47.6	0.71	3.52	78.8	64.4	20.8
68	9.1	63.6	46.7	0.73	4.18	77.9	85.1	6.8
68	11.2	64.0	47.0	0.73	4.08	77.9	81.9	9.9
68	12.6	64.2	47.1	0.73	4.03	77.9	80.4	12.1
68	14.0	64.3	47.2	0.73	4.00	78.0	79.1	14.6
68	14.7	64.4	47.3	0.73	3.98	77.9	78.6	15.9
68	15.4	64.4	47.3	0.73	3.96	77.9	78.1	17.3
68	16.8	64.5	47.4	0.73	3.94	78.0	77.3	20.1
75	9.1	61.9	46.0	0.74	4.46	77.1	91.9	6.7
75	11.2	62.3	46.3	0.74	4.36	77.1	88.8	9.6
75	12.6	62.4	46.4	0.74	4.31	77.1	87.2	11.9
75	14.0	62.5	46.5	0.74	4.27	77.1	86.0	14.3
75	14.7	62.6	46.5	0.74	4.25	77.1	85.5	15.6
75	15.4	62.6	46.6	0.74	4.24	77.1	85.0	16.9
75	16.8	62.7	46.6	0.74	4.21	77.1	84.2	19.7
86	9.1	59.0	44.9	0.76	4.94	75.8	102.7	6.5
86	11.2	59.3	45.2	0.76	4.83	75.8	99.5	9.3
86	12.6	59.5	45.3	0.76	4.77	75.8	98.0	11.5
86	14.0	59.6	45.4	0.76	4.72	75.7	96.8	13.9
86	14.7	59.7	45.5	0.76	4.70	75.7	96.3	15.1
86	15.4	59.7	45.5	0.76	4.68	75.7	95.8	16.4
86	16.8	59.8	45.6	0.76	4.65	75.7	95.0	19.1
95	9.1	56.4	44.0	0.78	5.39	74.8	111.4	6.2
95	11.2	56.7	44.3	0.78	5.26	74.7	108.3	9.0
95	12.6	56.9	44.4	0.78	5.21	74.6	106.8	11.1
95	14.0	57.0	44.5	0.78	5.16	74.6	105.7	13.4
95	14.7	57.0	44.6	0.78	5.14	74.6	105.1	14.6
95	15.4	57.0	44.6	0.78	5.12	74.5	104.7	15.8
95	16.8	57.2	44.7	0.78	5.09	74.6	103.9	18.4
105	9.1	53.2	42.6	0.80	5.95	73.5	121.1	0.0
105	11.2	53.5	42.9	0.80	5.82	73.4	118.1	0.0
105	12.6	53.7	43.1	0.80	5.76	73.3	116.6	10.8
105	14.0	53.8	43.2	0.80	5.71	73.3	115.5	13.0
105	14.7	53.9	43.2	0.80	5.69	73.3	115.0	14.2
105	15.4	53.9	43.2	0.80	5.67	73.3	114.5	15.4
105	16.8	54.0	43.3	0.80	5.64	73.2	113.7	17.9

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Table 89. GEH060 cooling performance (continued)

EWT	GPM	Total Mbtuh	Sen Mbtuh	SHR	Power kW	Reject Mbtuh	LWT	Feet Head
110	9.1	51.5	42.0	0.82	6.27	72.8	126.0	6.0
110	11.2	51.9	42.4	0.82	6.13	72.8	123.0	0.0
110	12.6	52.0	42.5	0.82	6.07	72.7	121.5	10.6
110	14.0	52.1	42.6	0.82	6.01	72.6	120.4	12.8
110	14.7	52.2	42.6	0.82	5.99	72.6	119.9	14.0
110	15.4	52.2	42.6	0.82	5.97	72.6	119.4	15.2
110	16.8	52.5	42.9	0.82	5.94	72.7	118.7	17.7

Notes: Cooling performance data is tabulated at 80.6°F DB/66.2°F WB entering air at ARI/ISO 13256-1 rated cfm. For ARI/ISO 13256-1 certified ratings, see Table 17, p. 27. See Performance correction tables to correct performance at conditions other than those tabulated. Data shown is for unit performance only. Interpolation is permissible. Extrapolation is not. Rated GPM: 14.0 Minimum cfm 1520; Rated cfm 1900; Maximum cfm 2280

Table 90. GEH060 heating performance

EWT	GPM	Htg Cap Mbtuh	Absorb Mbtuh	Power kW	LWT	Feet Head
25	9.1	43.7	29.2	4.26	18.6	7.9
25	11.2	44.5	29.9	4.28	19.7	11.5
25	12.6	44.7	30.1	4.28	20.2	14.1
25	14.0	45.1	30.4	4.30	20.7	16.8
25	14.7	45.0	30.4	4.29	20.9	18.2
25	15.4	45.2	30.5	4.29	21.0	19.7
25	16.8	45.4	30.8	4.30	21.3	22.7
32	9.1	47.9	33.1	4.33	24.7	7.8
32	11.2	48.8	34.0	4.36	25.9	11.2
32	12.6	49.1	34.2	4.36	26.6	13.8
32	14.0	49.3	34.5	4.36	27.1	16.5
32	14.7	49.5	34.6	4.36	27.3	17.9
32	15.4	49.7	34.8	4.37	27.5	19.4
32	16.8	50.1	35.1	4.38	27.8	22.3
45	9.1	55.2	39.9	4.47	36.2	7.3
45	11.2	56.1	40.8	4.48	37.7	10.6
45	12.6	56.4	41.1	4.49	38.5	13.0
45	14.0	56.8	41.4	4.49	39.1	15.7
45	14.7	57.0	41.6	4.50	39.3	17.1
45	15.4	57.1	41.7	4.51	39.6	9.3
45	16.8	57.4	42.0	4.51	40.0	10.8
55	9.1	62.0	46.3	4.60	44.8	7.1
55	11.2	63.2	47.4	4.63	46.5	10.2
55	12.6	63.5	47.7	4.63	47.4	12.6
55	14.0	63.9	48.1	4.63	48.1	15.1
55	14.7	64.2	48.3	4.64	48.4	16.5
55	15.4	64.3	48.5	4.65	48.7	17.9
55	16.8	64.6	48.7	4.65	49.2	20.8
68	9.1	70.8	54.3	4.83	56.1	6.8
68	11.2	72.3	55.8	4.86	58.0	9.9
68	12.6	73.1	56.4	4.87	59.0	12.1

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Table 90. GEH060 heating performance (continued)

EWT	GPM	Htg Cap Mbtuh	Absorb Mbtuh	Power kW	LWT	Feet Head
68	14.0	73.6	57.0	4.89	59.9	14.6
68	14.7	73.8	57.1	4.89	60.2	15.9
68	15.4	74.0	57.3	4.89	60.6	17.3
68	16.8	74.6	57.8	4.91	61.1	20.1
75	9.1	76.2	59.3	4.96	62.0	6.7
75	11.2	77.9	60.9	4.99	64.1	9.6
75	12.6	78.7	61.6	5.01	65.2	11.9
75	14.0	79.2	62.1	5.02	66.1	14.3
75	14.7	79.5	62.3	5.02	66.5	15.6
75	15.4	79.8	62.6	5.03	66.9	16.9
75	16.8	80.2	63.0	5.04	67.5	19.7
86	9.1	84.7	67.0	5.17	71.3	6.5
86	11.2	87.1	69.3	5.24	73.6	9.3
86	12.6	87.8	69.9	5.25	74.9	11.5
86	14.0	89.0	70.9	5.29	75.9	13.9
86	14.7	89.2	71.1	5.29	76.3	15.1
86	15.4	89.5	71.4	5.30	76.7	16.4
86	16.8	90.0	71.9	5.32	77.4	19.1

Notes: Heating performance data is tabulated at 68°F DB entering air at ARI/ISO 13256-1 rated cfm. For ARI/ISO 13256-1 certified ratings, see Table 17, p. 27. See Performance correction tables to correct performance at conditions other than those tabulated. Data shown is for unit performance only. Interpolation is permissible. Extrapolation is not. Rated GPM: 14.0 Minimum cfm 1520; Rated cfm 1900; Maximum cfm 2280

Table 91. GEH060 fan correction factors

Entering cfm	Cooling Capacity	Sensible Capacity	Cooling Input Watts	Heating Capacity	Heating Input Watts
1520	0.955	0.876	1.001	0.986	1.061
1615	0.968	0.908	1.002	0.989	1.042
1710	0.979	0.937	1.002	0.993	1.026
1805	0.990	0.969	1.000	0.996	1.012
1900	1.000	1.000	1.000	1.000	1.000
2090	1.018	1.059	1.001	1.003	0.978
2185	1.026	1.089	1.001	1.010	0.970
2280	1.033	1.116	1.001	1.007	0.958

Table 92. GEH060 correction factors for variation in entering air temperature

Cooling Entering Air WB°F	Cooling Capacity	Cooling Input Watts	Sensible vs. Entering Dry Bulb Multipliers					Heating Entering Air DB°F	Heating Capacity	Heating Input Watts
			65.6	70.6	75.6	80.6	85.6			
49.4	0.920	1.001	0.995	1.064	1.135	*	*	53.0	1.030	0.883
56.3	0.921	1.001	0.799	1.020	1.136	*	*	58.0	1.023	0.921
60.3	0.922	1.001	0.603	0.834	1.059	*	*	63.0	1.013	0.960
63.2	0.955	1.002	0.457	0.690	0.919	1.144	*	68.0	1.000	1.000
66.2	1.000	1.000		0.533	0.767	1.000	1.223	73.0	0.987	1.040
72.1	1.099	1.001			0.459	0.690	0.922	78.0	0.977	1.085
77.1	1.188	1.003				0.419	0.657	83.0	0.966	1.131

Note: * = Sensible equals total capacity

Table 93. GEV060 cooling performance

EWT	GPM	Total Mbtuh	Sen Mbtuh	SHR	Power kW	Reject Mbtuh	LWT	Feet Head
45	9.1	68.1	48.5	0.71	3.46	80.0	62.6	8.0
45	11.2	68.7	48.8	0.71	3.36	80.1	59.3	11.5
45	12.6	68.9	49.0	0.71	3.32	80.3	57.7	14.2
45	14.0	69.1	49.2	0.71	3.28	80.3	56.5	17.1
45	14.7	69.3	49.3	0.71	3.26	80.4	55.9	18.6
45	15.4	69.3	49.3	0.71	3.25	80.4	55.4	20.2
45	16.8	69.5	49.4	0.71	3.22	80.5	54.6	23.5
55	9.1	65.9	47.6	0.72	3.82	78.9	72.3	7.7
55	11.2	66.3	47.9	0.72	3.72	79.0	69.1	11.1
55	12.6	66.6	48.1	0.72	3.68	79.1	67.6	13.7
55	14.0	66.8	48.2	0.72	3.63	79.1	66.3	16.5
55	14.7	66.8	48.3	0.72	3.61	79.1	65.8	17.9
55	15.4	66.9	48.3	0.72	3.60	79.2	65.3	19.5
55	16.8	67.0	48.4	0.72	3.57	79.2	64.4	22.7
68	9.1	63.9	47.5	0.74	4.27	78.4	85.2	7.4
68	11.2	64.3	47.9	0.74	4.17	78.6	82.0	10.7
68	12.6	64.6	48.0	0.74	4.11	78.6	80.5	13.1
68	14.0	64.8	48.2	0.74	4.07	78.6	79.2	15.8
68	14.7	64.8	48.2	0.74	4.05	78.7	78.7	17.3
68	15.4	64.9	48.3	0.74	4.03	78.7	78.2	18.7
68	16.8	65.0	48.4	0.74	4.01	78.7	77.4	21.8
75	9.1	62.0	46.8	0.75	4.55	77.6	92.0	7.2
75	11.2	62.5	47.1	0.75	4.44	77.7	88.9	10.4
75	12.6	62.7	47.3	0.75	4.39	77.7	87.3	12.8
75	14.0	62.9	47.4	0.75	4.35	77.7	86.1	15.5
75	14.7	63.0	47.5	0.75	4.33	77.8	85.6	16.9
75	15.4	63.0	47.5	0.75	4.32	77.8	85.1	18.3
75	16.8	63.2	47.6	0.75	4.29	77.8	84.3	21.3
86	9.1	59.1	45.7	0.77	5.01	76.1	102.7	7.0
86	11.2	59.5	46.0	0.77	4.88	76.2	99.6	10.1
86	12.6	59.8	46.2	0.77	4.83	76.2	98.1	12.4
86	14.0	59.9	46.3	0.77	4.79	76.3	96.9	15.0
86	14.7	60.0	46.4	0.77	4.77	76.3	96.4	16.3
86	15.4	60.1	46.4	0.77	4.75	76.3	95.9	17.7
86	16.8	60.2	46.5	0.77	4.72	76.3	95.1	20.6
95	9.1	56.5	44.8	0.79	5.45	75.1	111.5	6.7
95	11.2	56.8	45.0	0.79	5.33	75.0	108.4	9.7
95	12.6	57.1	45.2	0.79	5.27	75.1	106.9	12.0
95	14.0	57.2	45.3	0.79	5.23	75.1	105.7	14.5
95	14.7	57.3	45.4	0.79	5.21	75.1	105.2	15.8
95	15.4	57.4	45.4	0.79	5.19	75.1	104.7	17.1
95	16.8	57.5	45.5	0.79	5.16	75.1	103.9	19.9

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Table 93. GEV060 cooling performance (continued)

EWT	GPM	Total Mbtuh	Sen Mbtuh	SHR	Power kW	Reject Mbtuh	LWT	Feet Head
105	9.1	53.1	43.4	0.82	6.01	73.7	121.2	6.6
105	11.2	53.5	43.7	0.82	5.88	73.6	118.1	9.5
105	12.6	53.7	43.9	0.82	5.81	73.6	116.7	11.6
105	14.0	53.8	43.9	0.82	5.76	73.4	115.5	14.1
105	14.7	54.0	44.1	0.82	5.74	73.6	115.0	15.3
105	15.4	54.1	44.2	0.82	5.73	73.6	114.6	16.6
105	16.8	54.2	44.3	0.82	5.69	73.6	113.8	19.4
110	9.1	51.4	42.8	0.83	6.32	73.0	126.0	6.5
110	11.2	51.9	43.2	0.83	6.19	73.0	123.0	9.3
110	12.6	52.1	43.4	0.83	6.12	73.0	121.6	11.5
110	14.0	52.2	43.4	0.83	6.07	72.9	120.4	13.9
110	14.7	52.3	43.5	0.83	6.05	72.9	119.9	15.1
110	15.4	52.4	43.6	0.83	6.03	72.9	119.5	16.4
110	16.8	52.5	43.6	0.83	5.99	72.9	118.7	19.1

Notes: Cooling performance data is tabulated at 80.6°F DB/66.2°F WB entering air at ARI/ISO 13256-1 rated cfm. For ARI/ISO 13256-1 certified ratings, see Table 18, p. 27. See Performance correction tables to correct performance at conditions other than those tabulated. Data shown is for unit performance only. Interpolation is permissible. Extrapolation is not. Rated GPM: 14.0 Minimum cfm 1520; Rated cfm 1900; Maximum cfm 2280

Table 94. GEV060 heating performance

EWT	GPM	Htg Cap Mbtuh	Absorb Mbtuh	Power kW	LWT	Feet Head
25	9.1	43.4	29.0	4.23	18.6	8.8
25	11.2	44.1	29.6	4.24	19.7	12.4
25	12.6	44.4	29.9	4.25	20.2	15.3
25	14.0	44.7	30.2	4.25	20.7	18.4
25	14.7	44.9	30.4	4.26	20.9	20.0
25	15.4	45.0	30.5	4.26	21.0	21.7
25	16.8	45.1	30.6	4.26	21.4	25.3
32	9.1	47.8	33.1	4.31	24.7	8.6
32	11.2	48.5	33.8	4.32	26.0	12.2
32	12.6	49.0	34.2	4.33	26.6	15.0
32	14.0	49.3	34.5	4.33	27.1	18.0
32	14.7	49.3	34.5	4.33	27.3	19.6
32	15.4	49.3	34.5	4.33	27.5	21.3
32	16.8	49.7	34.9	4.34	27.8	24.8
45	9.1	55.3	40.1	4.43	36.2	8.0
45	11.2	56.2	41.0	4.45	37.7	11.5
45	12.6	56.5	41.3	4.45	38.4	14.2
45	14.0	56.8	41.6	4.46	39.1	17.1
45	14.7	56.9	41.7	4.46	39.3	18.6
45	15.4	57.2	42.0	4.48	39.5	20.2
45	16.8	57.3	42.1	4.47	40.0	23.5
55	9.1	62.2	46.6	4.56	44.8	7.7
55	11.2	63.2	47.6	4.58	46.5	11.1

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Table 94. GEV060 heating performance (continued)

EWT	GPM	Htg Cap Mbtuh	Absorb Mbtuh	Power kW	LWT	Feet Head
55	12.6	63.7	48.0	4.59	47.4	13.7
55	14.0	64.1	48.4	4.60	48.1	16.5
55	14.7	64.2	48.5	4.60	48.4	17.9
55	15.4	64.4	48.7	4.60	48.7	19.5
55	16.8	64.8	49.0	4.61	49.2	22.7
68	9.1	72.0	55.6	4.80	55.8	7.4
68	11.2	73.2	56.7	4.83	57.9	10.7
68	12.6	74.2	57.6	4.85	58.9	13.1
68	14.0	74.8	58.2	4.86	59.7	15.8
68	14.7	75.0	58.4	4.87	60.1	17.3
68	15.4	75.3	58.6	4.87	60.4	18.7
68	16.8	75.8	59.1	4.89	61.0	21.8
75	9.1	77.0	60.2	4.91	61.8	7.2
75	11.2	79.0	62.1	4.95	63.9	10.4
75	12.6	79.7	62.7	4.97	65.0	12.8
75	14.0	80.4	63.4	4.99	65.9	15.5
75	14.7	80.7	63.7	4.99	66.3	16.9
75	15.4	81.0	64.0	5.00	66.7	18.3
75	16.8	81.5	64.4	5.01	67.3	21.3
86	9.1	86.3	68.7	5.14	70.9	7.0
86	11.2	88.6	70.8	5.19	73.3	10.1
86	12.6	89.6	71.8	5.22	74.6	12.4
86	14.0	90.2	72.3	5.23	75.7	15.0
86	14.7	90.6	72.7	5.24	76.1	16.3
86	15.4	90.8	72.9	5.24	76.5	17.7
86	16.8	91.4	73.4	5.26	77.3	20.6

Notes: Heating performance data is tabulated at 68°F DB entering air at ARI/ISO 13256-1 rated cfm. For ARI/ISO 13256-1 certified ratings, see Table 18, p. 27. See Performance correction tables to correct performance at conditions other than those tabulated. Data shown is for unit performance only. Interpolation is permissible. Extrapolation is not. Rated GPM: 14.0 Minimum cfm 1520; Rated cfm 1900; Maximum cfm 2280

Table 95. GEV060 fan correction factors

Entering cfm	Cooling Capacity	Sensible Capacity	Cooling Input Watts	Heating Capacity	Heating Input Watts
1520	0.955	0.874	1.001	0.985	1.059
1615	0.968	0.905	0.999	0.990	1.042
1710	0.980	0.938	0.999	0.993	1.026
1805	0.990	0.970	1.000	0.997	1.012
1900	1.000	1.000	1.000	1.000	1.000
2090	1.017	1.060	1.000	1.002	0.975
2185	1.025	1.091	1.001	1.004	0.966
2280	1.032	1.122	1.001	1.006	0.957

Table 96. 006, 009, 012, 015, 018 correction factors for variation in entering air temperature

Cooling Entering Air WB°F	Cooling Capacity	Cooling Input Watts	Sensible vs. Entering Dry Bulb Multipliers					Heating Entering Air DB°F	Heating Capacity	Heating Input Watts
			65.6	70.6	75.6	80.6	85.6			
49.4	0.920	1.001	0.995	1.064	1.135	*	*	53.0	1.030	0.883
56.3	0.921	1.001	0.799	1.020	1.136	*	*	58.0	1.023	0.921
60.3	0.922	1.001	0.603	0.834	1.059	*	*	63.0	1.013	0.960
63.2	0.955	1.002	0.457	0.690	0.919	1.144	*	68.0	1.000	1.000
66.2	1.000	1.000		0.533	0.767	1.000	1.223	73.0	0.987	1.040
72.1	1.099	1.001			0.459	0.690	0.922	78.0	0.977	1.085
77.1	1.188	1.003				0.419	0.657	83.0	0.966	1.131

Note: * = Sensible equals total capacity

Table 97. GEVE060 correction factors for variation in entering air temperature

Cooling Entering Air WB°F	Cooling Capacity	Cooling Input Watts	Sensible vs. Entering Dry Bulb Multipliers					Heating Entering Air DB°F	Heating Capacity	Heating Input Watts
			65.6	70.6	75.6	80.6	85.6			
49.4	0.926	1.001	0.993	1.060	1.129	*	*	53.0	1.032	0.884
56.3	0.927	1.001	0.800	1.025	1.130	*	*	58.0	1.022	0.921
60.3	0.928	1.001	0.605	0.833	1.064	*	*	63.0	1.008	0.957
63.2	0.955	1.001	0.458	0.691	0.920	1.147	*	68.0	1.000	1.000
66.2	1.000	1.000		0.533	0.765	1.000	1.225	73.0	0.985	1.039
72.1	1.092	0.998			0.457	0.689	0.923	78.0	0.976	1.084
77.1	1.174	1.000				0.418	0.654	83.0	0.965	1.130

Note: * = Sensible equals total capacity

Unit Fan Performance

Table 98. Fan performance for standard static motor (includes wet coils and 1” filter)

Model Number		Max cfm	Min cfm	External Static Pressure (in. of wg)										
				0	0.05	0.1	0.15	0.2	0.25	0.3	0.35	0.4	0.45	0.5
GEH/GEV006	High	258		—	—	—	—	—	—	—	—	—	—	258
GEH/GEV006	Med			—	—	—	—	—	—	—	266	253	239	222
GEH/GEV006	Low		172	—	—	—	—	—	263	249	235	222	208	191
GEH/GEV009	High	342		—	—	—	—	345	330	316	302	289	275	258
GEH/GEV009	Med			—	356	341	325	309	294	280	266	253	239	222
GEH/GEV009	Low		228	342	325	310	294	278	263	249	235	222	—	—
GEH/GEV012	High	456		—	—	—	—	—	—	—	—	—	—	—
GEH/GEV012	Med			—	—	—	—	—	459	451	447	446	446	443
GEH/GEV012	Low		304	—	—	464	453	441	431	423	419	418	418	415
GEH/GEV015	High	550		550	537	526	515	503	493	485	481	480	480	477
GEH/GEV015	Med			516	503	492	481	469	459	451	447	446	446	443
GEH/GEV015	Low		380	488	475	464	453	441	431	423	419	418	418	415
GEH/GEV018	High	684		—	—	688	675	664	649	633	612	587	560	522
GEH/GEV018	Med			657	652	644	633	621	605	587	568	543	512	475
GEH/GEV018	Low		456	632	624	615	604	592	578	561	540	513	481	431
GEH/GEV024	High	912		—	—	—	—	—	922	903	883	860	833	802
GEH/GEV024	Med			915	901	891	879	866	851	835	819	801	779	751
GEH/GEV024	Low		608	827	819	806	793	780	769	756	741	723	701	674
GEH/GEV030	High	1009		1009	988	971	955	939	922	903	883	860	833	802
GEH/GEV030	Med			915	901	891	879	866	851	835	819	801	779	751
GEH/GEV030	Low		720	827	819	806	793	780	769	756	741	723	701	—
GEH/GEV036	High	1368		—	—	—	—	—	1381	1366	1351	1334	1315	1295
GEH/GEV036	Med			1221	1218	1216	1211	1206	1199	1190	1181	1170	1159	1146
GEH/GEV036	Low		912	1099	1094	1090	1087	1083	1079	1075	1069	1062	1052	1040
GEH/GEV042	High	1436		1436	1427	1417	1406	1394	1381	1366	1351	1334	1315	1295
GEH/GEV042	Med			1221	1218	1216	1211	1206	1199	1190	1181	1170	1159	1146
GEH/GEV042	Low		1064	1099	1094	1090	1087	1083	1079	1075	1069	1062	—	—
GEH/GEV048	High	1824		1850	1786	1732	1686	1646	1608	1572	1536	1499	1459	1417
GEH/GEV048	Med			1783	1724	1675	1632	1595	1560	1526	1491	1455	1417	1376
GEH/GEV048	Low		1216	1687	1639	1598	1562	1530	1499	1467	1434	1399	1362	1321
GEH/GEV060	High	2226		2266	2246	2221	2194	2165	2133	2099	2063	2024	1984	1943
GEH/GEV060	Med			2056	2036	2011	1984	1955	1923	1889	1853	1814	1774	1733
GEH/GEV060	Low		1520	1883	1863	1838	1811	1782	1750	1716	1680	1641	1601	1560

Table 98. Fan performance for standard static motor (includes wet coils and 1″ filter) (continued)

Model Number		Max cfm	Min cfm	External Static Pressure (in. of wg)										
				0.55	0.6	0.65	0.7	0.75	0.8	0.85	0.9	0.95	1	1.05
GEH/GEV006	High	258		236	205	161	—	—	—	—	—	—	—	—
GEH/GEV006	Med			200	169	—	—	—	—	—	—	—	—	—
GEH/GEV006	Low		172	169	—	—	—	—	—	—	—	—	—	—
GEH/GEV009	High	342		236	205	—	—	—	—	—	—	—	—	—
GEH/GEV009	Med			—	—	—	—	—	—	—	—	—	—	—
GEH/GEV009	Low		228	—	—	—	—	—	—	—	—	—	—	—
GEH/GEV012	High	456		462	424	347	211	—	—	—	—	—	—	—
GEH/GEV012	Med			428	390	313	177	—	—	—	—	—	—	—
GEH/GEV012	Low		304	400	362	285	—	—	—	—	—	—	—	—
GEH/GEV015	High	550		462	424	347	—	—	—	—	—	—	—	—
GEH/GEV015	Med			428	390	313	—	—	—	—	—	—	—	—
GEH/GEV015	Low		380	400	362	—	—	—	—	—	—	—	—	—
GEH/GEV018	High	684		457	427	—	—	—	—	—	—	—	—	—
GEH/GEV018	Med			429	—	—	—	—	—	—	—	—	—	—
GEH/GEV018	Low		456	—	—	—	—	—	—	—	—	—	—	—
GEH/GEV024	High	912		766	723	675	623	572	—	—	—	—	—	—
GEH/GEV024	Med			715	670	621	577	—	—	—	—	—	—	—
GEH/GEV024	Low		608	642	605	—	—	—	—	—	—	—	—	—
GEH/GEV030	High	1009		766	723	675	—	—	—	—	—	—	—	—
GEH/GEV030	Med			715	—	—	—	—	—	—	—	—	—	—
GEH/GEV030	Low		720	—	—	—	—	—	—	—	—	—	—	—
GEH/GEV036	High	1368		1272	1247	1219	1187	1152	1112	1068	1018	963	901	—
GEH/GEV036	Med			1132	1116	1096	1073	1044	1010	969	922	867	—	—
GEH/GEV036	Low		912	1025	1007	985	958	927	890	—	—	—	—	—
GEH/GEV042	High	1436		1272	1247	1219	1187	1152	1112	1068	1018	—	—	—
GEH/GEV042	Med			1132	1116	1096	1073	1044	—	—	—	—	—	—
GEH/GEV042	Low		1064	—	—	—	—	—	—	—	—	—	—	—
GEH/GEV048	High	1824		1371	1323	1272	1216	—	—	—	—	—	—	—
GEH/GEV048	Med			1332	1285	1216	—	—	—	—	—	—	—	—
GEH/GEV048	Low		1216	1278	1216	—	—	—	—	—	—	—	—	—
GEH/GEV060	High	2226		1899	1854	1808	1761	1712	1664	1615	1566	1517	—	—
GEH/GEV060	Med			1689	1644	1598	1551	1502	—	—	—	—	—	—
GEH/GEV060	Low		1520	1516	—	—	—	—	—	—	—	—	—	—

Unit Fan Performance

Table 99. Fan performance for high static motor (includes wet coil and 1" filter)

Model Number		Max cfm	Min cfm	External Static Pressure (in. of wg)										
				0	0.05	0.1	0.15	0.2	0.25	0.3	0.35	0.4	0.45	0.5
GEH/GEV006	High	258		—	—	—	—	—	—	—	—	—	—	—
GEH/GEV006	Med			—	—	—	—	—	—	—	—	—	—	258
GEH/GEV006	Low		172	—	—	—	—	—	—	—	266	253	239	222
GEH/GEV009	High	342		—	—	—	—	—	—	—	345	332	318	301
GEH/GEV009	Med			—	—	—	—	345	330	316	302	289	275	258
GEH/GEV009	Low		228	—	356	341	325	309	294	280	266	253	239	222
GEH/GEV012	High	456		—	—	—	—	—	—	—	—	—	—	—
GEH/GEV012	Med			—	—	—	—	—	—	—	—	—	—	—
GEH/GEV012	Low		304	—	—	—	—	—	459	451	447	446	446	443
GEH/GEV015	High	570		—	—	552	541	529	519	511	507	506	506	503
GEH/GEV015	Med			550	537	526	515	503	493	485	481	480	480	477
GEH/GEV015	Low		380	516	503	492	481	469	459	451	447	446	446	443
GEH/GEV018	High	684		—	—	—	—	—	—	—	—	—	—	—
GEH/GEV018	Med			—	—	—	—	—	—	—	—	—	—	705
GEH/GEV018	Low		456	—	—	—	—	—	—	—	—	—	708	668
GEH/GEV024	High	912		—	—	—	—	—	—	—	—	935	906	875
GEH/GEV024	Med			—	—	—	—	—	922	903	883	860	833	802
GEH/GEV024	Low		608	915	901	891	879	866	851	835	819	801	779	751
GEH/GEV030	High	1080		—	1097	1074	1053	1033	1011	988	962	935	906	875
GEH/GEV030	Med			1009	988	971	955	939	922	903	883	860	833	802
GEH/GEV030	Low		720	915	901	891	879	866	851	835	819	801	779	751
GEH/GEV036	High	1368		—	—	—	—	—	—	—	—	—	—	—
GEH/GEV036	Med			—	—	—	—	—	1381	1366	1351	1334	1315	1295
GEH/GEV036	Low		912	1221	1218	1216	1211	1206	1199	1190	1181	1170	1159	1146
GEH/GEV042	High	1596		—	1605	1585	1566	1548	1531	1512	1493	1472	1449	1424
GEH/GEV042	Med			1436	1427	1417	1406	1394	1381	1366	1351	1334	1315	1295
GEH/GEV042	Low		1064	1221	1218	1216	1211	1206	1199	1190	1181	1170	1159	1146
GEH/GEV048	High	1824		—	—	—	—	—	—	—	—	—	—	—
GEH/GEV048	Med			—	—	—	—	—	—	—	—	—	—	—
GEH/GEV048	Low		1216	—	—	—	—	—	—	—	1853	1814	1774	1733
GEH/GEV060	High	2280		—	—	2291	2264	2235	2203	2169	2133	2094	2054	2013
GEH/GEV060	Med			2266	2246	2221	2194	2165	2133	2099	2063	2024	1984	1943
GEH/GEV060	Low		1520	2056	2036	2011	1984	1955	1923	1889	1853	1814	1774	1733

Table 99. Fan performance for high static motor (includes wet coil and 1" filter) (continued)

Model Number		Max cfm	Min cfm	External Static Pressure (in. of wg)										
				0.55	0.6	0.65	0.7	0.75	0.8	0.85	0.9	0.95	1	1.05
GEH/GEV006	High	258		279	248	204	143	—	—	—	—	—	—	—
GEH/GEV006	Med			236	205	161	100	—	—	—	—	—	—	—
GEH/GEV006	Low		172	200	169	125	—	—	—	—	—	—	—	—
GEH/GEV009	High	342		279	248	204	—	—	—	—	—	—	—	—
GEH/GEV009	Med			236	205	—	—	—	—	—	—	—	—	—
GEH/GEV009	Low		228	—	—	—	—	—	—	—	—	—	—	—
GEH/GEV012	High	456		488	450	373	237	—	—	—	—	—	—	—
GEH/GEV012	Med			462	424	347	211	—	—	—	—	—	—	—
GEH/GEV012	Low		304	428	390	313	177	—	—	—	—	—	—	—
GEH/GEV015	High	570		488	450	373	237	—	—	—	—	—	—	—
GEH/GEV015	Med			462	424	347	—	—	—	—	—	—	—	—
GEH/GEV015	Low		380	428	390	313	—	—	—	—	—	—	—	—
GEH/GEV018	High	684		725	676	623	566	503	431	—	—	—	—	—
GEH/GEV018	Med			657	608	556	504	450	—	—	—	—	—	—
GEH/GEV018	Low		456	626	580	533	483	431	—	—	—	—	—	—
GEH/GEV024	High	912		841	802	755	695	615	504	—	—	—	—	—
GEH/GEV024	Med			766	723	675	623	572	—	—	—	—	—	—
GEH/GEV024	Low		608	715	670	621	577	—	—	—	—	—	—	—
GEH/GEV030	High	1080		841	802	755	695	—	—	—	—	—	—	—
GEH/GEV030	Med			766	723	675	—	—	—	—	—	—	—	—
GEH/GEV030	Low		720	715	—	—	—	—	—	—	—	—	—	—
GEH/GEV036	High	1368		1396	1364	1329	1291	1249	1203	1154	1100	1042	979	—
GEH/GEV036	Med			1272	1247	1219	1187	1152	1112	1068	1018	963	901	—
GEH/GEV036	Low		912	1132	1116	1096	1073	1044	1010	969	922	867	—	—
GEH/GEV042	High	1596		1396	1364	1329	1291	1249	1203	1154	1100	1042	—	—
GEH/GEV042	Med			1272	1247	1219	1187	1152	1112	1068	1018	—	—	—
GEH/GEV042	Low		1064	1132	1116	1096	1073	1044	—	—	—	—	—	—
GEH/GEV048	High	1824		—	—	—	1831	1782	1734	1684	1636	1587	1540	—
GEH/GEV048	Med			—	1854	1808	1761	1712	1664	1615	1566	1517	1470	—
GEH/GEV048	Low		1216	1689	1644	1598	1551	1502	1454	1405	1356	1307	1260	—
GEH/GEV060	High	2280		1969	1924	1878	1831	1782	1734	1684	1636	1587	1540	—
GEH/GEV060	Med			1899	1854	1808	1761	1712	1664	1615	1566	1517	—	—
GEH/GEV060	Low		1520	1689	1644	1598	1551	1502	—	—	—	—	—	—

Table 100. Fan performance for high static motor (includes wet coil and 1" filter)

Model Number		Max cfm	Min cfm	External Static Pressure (in. of wg)						
				1.1	1.15	1.2	1.25	1.3	1.35	1.4
GEH/GEV048	High	1824		1448	1404	1362	1321	1281	1242	1201
GEH/GEV048	Med			1378	1334	1292	1251	1211	—	—
GEH/GEV048	Low		1216	—	—	—	—	—	—	—

Table 101. Waterside economizer performance ½-5 ton

Input Data				Output Data						
Tonnage of Heat Pump	Model GEH	scfm	GPM	Total Capacity (Mbh)	Sensible Capacity (Mbh)	LVG. Air DB (°F)	LVG. Air WB (°F)	Standard APD (in. wg.)	LVG.Fluid Temp. (°F)	Fluid PD (FT H2O)
0.50	006	215	1.5	6.63	4.92	58.8	57.3	0.04	53.8	0.34
0.50	006	215	1.8	7.15	5.01	58.4	56.5	0.04	52.9	0.46
0.50	006	215	2.0	7.45	5.11	58.0	56.0	0.04	52.5	0.55
0.75	009	285	1.7	7.86	5.91	61.1	58.4	0.07	54.2	0.42
0.75	009	285	2.1	8.49	6.14	60.3	57.7	0.07	53.1	0.60
0.75	009	285	2.3	8.76	6.25	60.0	57.3	0.07	52.6	0.71
1.00	012	380	2.2	9.75	7.41	62.2	59.1	0.11	53.8	0.65
1.00	012	380	2.8	10.60	7.72	61.4	58.3	0.11	52.6	0.99
1.00	012	380	3.1	11.03	7.91	61.0	57.9	0.11	52.1	1.18
1.25	015	460	2.8	11.44	8.68	62.7	59.3	0.15	53.1	0.99
1.25	015	460	3.5	12.33	9.03	62.1	58.7	0.15	52.0	1.46
1.25	015	460	3.8	12.69	9.19	61.7	58.4	0.15	51.7	1.69
1.50	018	570	3.3	16.27	11.71	61.2	58.1	0.12	54.8	1.36
1.50	018	570	4.2	17.61	12.25	60.4	57.3	0.12	53.4	2.08
1.50	018	570	4.6	18.05	12.42	60.1	57.0	0.12	52.8	2.45
2.00	024	760	4.4	20.25	14.65	62.4	58.7	0.19	54.2	2.26
2.00	024	760	5.5	21.58	15.21	61.7	0.2	0.19	52.8	3.4
2.00	024	760	6.1	22.19	15.43	61.4	57.9	0.19	52.3	4.03
2.50	030	900	5.5	23.27	16.81	62.9	59.0	0.25	53.4	3.4
2.50	030	900	6.9	24.71	17.38	62.3	58.5	0.25	52.1	5.01
2.50	030	900	7.6	25.28	17.64	62.1	58.3	0.25	51.6	5.95
3.00	036	1140	6.6	29.28	21.57	62.7	59.1	0.19	53.8	2.39
3.00	036	1140	8.3	31.47	22.41	62.0	58.4	0.19	52.6	5.25
3.00	036	1140	9.1	32.20	22.20	61.8	58.2	0.19	52.1	6.19
3.50	042	1330	7.8	32.88	24.88	63.4	59.4	0.25	53.4	4.70
3.50	042	1330	9.7	34.81	25.05	62.8	58.9	0.25	52.2	6.92
3.50	042	1330	10.7	35.67	25.37	62.6	58.7	0.25	51.6	8.24
4.00	048	1520	8.8	39.77	29.11	62.5	58.9	0.17	54.0	1.24
4.00	048	1520	11.0	42.44	30.25	61.8	58.3	0.17	52.7	1.86
4.00	048	1520	12.1	43.65	30.69	61.5	58.0	0.17	52.2	2.21
5.00	060	1900	11.6	47.59	34.73	63.3	59.3	0.24	53.2	2.04
5.00	060	1900	14.5	50.66	35.94	62.7	58.7	0.24	52.0	3.05
5.00	060	1900	16.0	51.87	36.39	62.5	58.5	0.24	51.5	3.65

Notes: Entering Air DB/WB (80/67). Entering Fluid (°F) 45.

Table 102. Antifreeze correction factors

Methanol (concentration by volume)						
Item	**0%**	**10%**	**20%**	**30%**	**40%**	**50%**
Cooling Capacity	1.000	0.998	0.997	0.995	0.993	0.992
Heating Capacity	1.000	0.995	0.990	0.985	0.979	0.974
Pressure Drop	1.000	1.023	1.057	1.091	1.122	1.160
Ethylene Glycol (concentration by volume)						
Item	**0%**	**10%**	**20%**	**30%**	**40%**	**50%**
Cooling Capacity	1.000	0.996	0.991	0.987	0.983	0.979
Heating Capacity	1.000	0.993	0.985	0.977	0.969	0.961
Pressure Drop	1.000	1.024	1.068	1.124	1.188	1.263
Propylene Glycol (concentration by volume)						
Item	**0%**	**10%**	**20%**	**30%**	**40%**	**50%**
Cooling Capacity	1.000	0.993	0.987	0.980	0.974	0.968
Heating Capacity	1.000	0.986	0.973	0.960	0.948	0.935
Pressure Drop	1.000	1.040	1.098	1.174	1.273	1.405

continued on next page

	Brine (NaCL) (concentration by volume)					
Item	**0%**	**10%**	**20%**	**30%**	**40%**	**50%**
Cooling Capacity	1.000	0.994	0.987	0.979	0.971	0.963
Heating Capacity	1.000	0.993	0.987	0.982	0.978	0.976
Pressure Drop	1.000	1.154	1.325	1.497	1.669	1.841

Figure 8. Cooling capacity correction factor

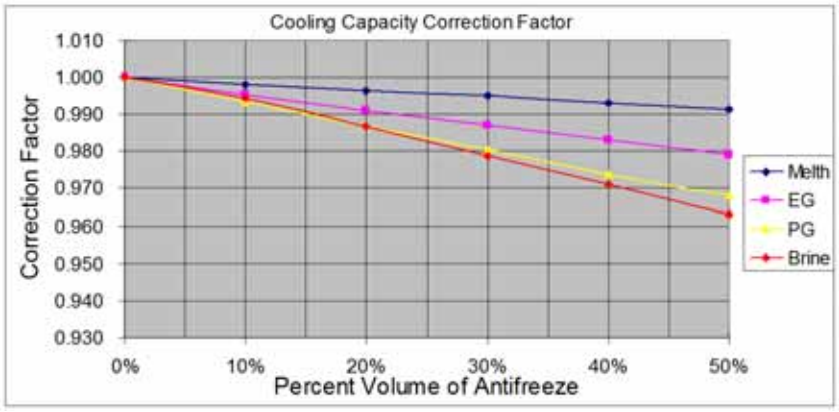


Figure 9. Heating capacity correction factor

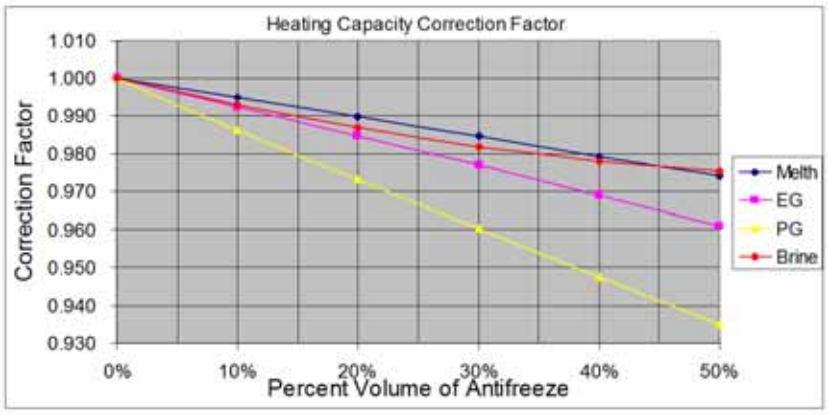
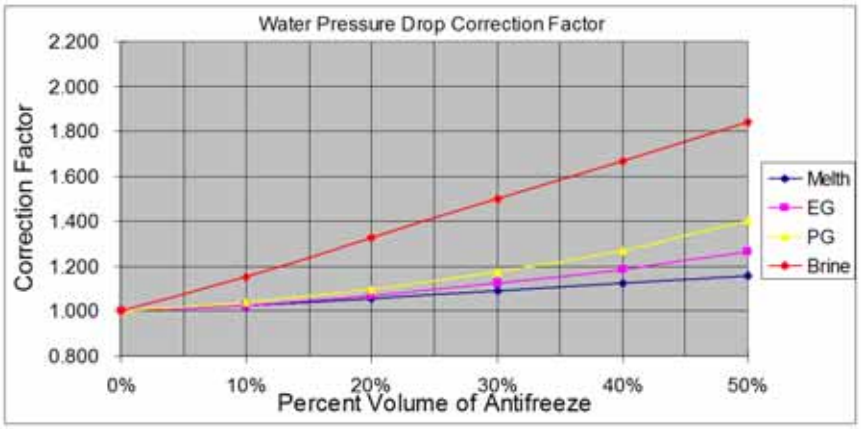


Figure 10. Water pressure drop correction factor



Example 1 (Ethylene Glycol): The antifreeze solution is 20% by volume of Ethylene Glycol. Determine the corrected cooling capacity and waterside pressure drop for a GEHE018 when the EWT is 86°F and the GPM is 4.2.

From the catalog data, the cooling capacity at these conditions with 100% water is 18.6 Mbtuh, and the waterside pressure drop is 6.0 feet of head. At 20% Ethylene Glycol, the correction factor for cool capacity is 0.9912 and the pressure drop is 1.068.

The corrected cooling capacity (Mbtuh) = 18.6 * 0.9912 = 18.4. The corrected water side pressure drop (Ft. head) = 6.9 * 1.068 = 7.4.

Example 2 (Propylene Glycol): The antifreeze solution is 30% by volume of Propylene Glycol. Determine the corrected heating capacity and waterside pressure drop for a GEHE042 when the EWT is 45°F and the GPM is 9.7.

From the catalog data, the heating capacity at these conditions with 100% water is 36.7 Mbtuh, and the waterside pressure drop is 16.1 feet of head. At 30% Propylene Glycol, the correction factor for heat capacity is 0.9603 and the pressure drop is 1.174.

The corrected cooling capacity (Mbtuh) = 36.7 * 0.9603 = 35.2. The corrected water side pressure drop (Ft. head) = 16.1 * 1.174 = 18.9.

Electrical Data

Table 103. Electrical data: standard static motors—½–5 tons

Model No.	Volts	Total Unit FLA	Comp RLA (ea)	Comp LRA (ea)	No. of Comp.	Cmp MCC	Blower Motor FLA	Blower Motor hp	Fan Motor Num.	Minimum Circuit Ampacity	Maximum Overcurrent Protective Device	Electric Heat kW	Electric Heat Amps
GEHE / GEVE													
006	115/60/1	6.8	5.6	30.0	1	7.5	1.20	1/12	1	8.20	15	0.0	0.0
006	208/60/1	3.9	3.3	14.0	1	4.2	0.60	1/12	1	4.73	15	0.0	0.0
006	208/60/1	4.5	3.3	14.0	1	4.2	0.60	1/12	1	5.68	15	0.8	3.9
006	230/60/1	3.8	3.2	15.0	1	4.2	0.60	1/12	1	4.60	15	0.0	0.0
006	230/60/1	4.9	3.2	15.0	1	4.2	0.60	1/12	1	6.18	15	1.0	4.3
006	220-240/50/1	3.4	2.9	17.0	1	4.0	0.52	1/12	1	4.15	15	0.0	0.0
006	220-240/50/1	7.4	2.9	17.0	1	4.0	0.52	1/12	1	9.19	15	1.6	6.8
006	265/60/1	3.0	2.5	11.0	1	3.5	0.52	1/12	1	3.65	15	0.0	0.0
006	265/60/1	5.5	2.5	11.0	1	3.5	0.52	1/12	1	6.92	15	1.3	5.0
009	115/60/1	7.6	6.4	36.0	1	8.6	1.20	1/12	1	9.20	15	0.0	0.0
009	208/60/1	4.3	3.7	16.0	1	4.8	0.60	1/12	1	5.23	15	0.0	0.0
009	208/60/1	6.5	3.7	16.0	1	4.8	0.60	1/12	1	8.14	15	1.2	5.9
009	230/60/1	4.1	3.5	17.0	1	4.8	0.60	1/12	1	4.98	15	0.0	0.0
009	230/60/1	7.1	3.5	17.0	1	4.8	0.60	1/12	1	8.90	15	1.5	6.5
009	220-240/50/1	6.0	5.3	23.0	1	7.4	0.72	1/8	1	7.35	15	0.0	0.0
009	220-240/50/1	9.8	5.3	23.0	1	7.4	0.72	1/8	1	12.20	15	2.2	9.0
009	265/60/1	3.3	2.8	13.0	1	3.7	0.52	1/12	1	4.02	15	0.0	0.0
009	265/60/1	8.1	2.8	13.0	1	3.7	0.52	1/12	1	10.08	15	2.0	7.5
012	115/60/1	13.7	12.1	58.0	1	16.9	1.57	1/8	1	16.70	25	0.0	0.0
012	208/60/1	7.0	6.3	30.0	1	8.8	0.70	1/8	1	8.58	15	0.0	0.0
012	208/60/1	8.5	6.3	27.0	1	8.8	0.70	1/8	1	10.67	15	1.6	7.8
012	230/60/1	7.0	6.3	30.0	1	8.8	0.70	1/8	1	8.58	15	0.0	0.0
012	230/60/1	9.4	6.3	30.0	1	8.8	0.70	1/8	1	11.74	15	2.0	8.7
012	220-240/50/1	7.4	6.7	30.0	1	9.4	0.72	1/8	1	9.10	15	0.0	0.0
012	220-240/50/1	12.0	6.7	30.0	1	9.4	0.72	1/8	1	14.96	15	2.7	11.3
012	265/60/1	5.7	5.0	23.0	1	7.0	0.72	1/8	1	6.97	15	0.0	0.0
012	265/60/1	10.7	5.0	23.0	1	7.0	0.72	1/8	1	13.40	15	2.7	10.0
015	208/60/1	8.6	7.9	36.0	1	11.1	0.70	1/8	1	10.58	15	0.0	0.0
015	208/60/1	10.3	7.9	36.0	1	11.1	0.70	1/8	1	12.89	15	2.0	9.6
015	230/60/1	8.6	7.9	36.0	1	11.1	0.70	1/8	1	10.58	15	0.0	0.0
015	230/60/1	11.6	7.9	36.0	1	11.1	0.70	1/8	1	14.46	15	2.5	10.9
015	220-240/50/1	9.0	8.2	36.0	1	11.5	0.80	1/8	1	11.05	15	0.0	0.0
015	220-240/50/1	14.5	8.2	36.0	1	11.5	0.80	1/8	1	18.08	20	3.3	13.7
015	265/60/1	7.1	6.4	30.0	1	9.0	0.72	1/8	1	8.72	15	0.0	0.0
015	265/60/1	13.2	6.4	30.0	1	9.0	0.72	1/8	1	16.47	20	3.3	12.5
018	208/60/1	10.5	9.6	42.0	1	13.4	0.90	1/8	1	12.90	20	0.0	0.0
018	208/60/1	12.7	9.6	42.0	1	13.4	0.90	1/8	1	15.91	20	2.5	11.8
018	230/60/1	10.5	9.6	42.0	1	13.4	0.90	1/8	1	12.90	20	0.0	0.0
018	230/60/1	13.9	9.6	42.0	1	13.4	0.90	1/8	1	17.43	20	3.0	13.0

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Table 103. Electrical data: standard static motors—½–5 tons (continued)

Model No.	Volts	Total Unit FLA	Comp RLA (ea)	Comp LRA (ea)	No. of Comp.	Cmp MCC	Blower Motor FLA	Blower Motor hp	Fan Motor Num.	Minimum Circuit Ampacity	Maximum Overcurrent Protective Device	Electric Heat kW	Electric Heat Amps
GEHE / GEVE													
018	220-240/50/1	11.1	9.6	54.0	1	15.0	1.53	1/3	1	13.53	20	0.0	0.0
018	220-240/50/1	19.7	9.6	54.0	1	15.0	1.53	1/3	1	24.57	25	4.4	18.1
018	265/60/1	8.5	7.7	35.0	1	10.8	0.80	1/8	1	10.43	15	0.0	0.0
018	265/60/1	15.9	7.7	35.0	1	10.8	0.80	1/8	1	19.87	20	4.0	15.1
018	380-415/50/3	5.2	4.2	28.0	1	6.5	0.95	1/3	1	6.20	15	0.0	0.0
018	380-415/50/3	7.0	3.6	28.0	1	5.6	0.95	1/3	1	8.75	15	4.4	6.1
024	208/60/1	14.9	12.8	58.3	1	20.0	2.10	1/3	1	18.10	30	0.0	0.0
024	208/60/1	17.8	12.8	58.3	1	20.0	2.10	1/3	1	22.22	30	3.3	15.7
024	230/60/1	14.9	12.8	58.3	1	20.0	2.10	1/3	1	18.10	30	0.0	0.0
024	230/60/1	19.5	12.8	58.3	1	20.0	2.10	1/3	1	24.36	30	4.0	17.4
024	220-240/50/1	12.7	11.2	60.0	1	17.5	1.53	1/3	1	15.53	25	0.0	0.0
024	220-240/50/1	24.0	11.2	60.0	1	17.5	1.53	1/3	1	30.04	35	5.4	22.5
024	265/60/1	11.1	9.6	54.0	1	15.0	1.53	1/3	1	13.53	20	0.0	0.0
024	265/60/1	21.5	9.6	54.0	1	15.0	1.53	1/3	1	26.91	30	5.3	20.0
024	208/60/3	9.2	7.7	53.7	1	12.0	1.53	1/3	1	11.16	15	0.0	0.0
024	208/60/3	10.6	7.7	53.7	1	12.0	1.53	1/3	1	13.22	15	3.3	9.0
024	230/60/3	9.8	7.7	53.7	1	12.0	2.10	1/3	1	11.73	15	0.0	0.0
024	230/60/3	12.1	7.7	53.7	1	12.0	2.10	1/3	1	15.18	20	4.0	10.0
024	380-415/50/3	5.2	4.2	28.0	1	6.5	0.95	1/3	1	6.20	15	0.0	0.0
024	380-415/50/3	8.5	4.2	28.0	1	6.5	0.95	1/3	1	10.58	15	5.4	7.5
024	460/60/3	4.6	3.6	28.0	1	5.6	0.95	1/3	1	5.45	15	0.0	0.0
024	460/60/3	7.6	3.6	28.0	1	5.6	0.95	1/3	1	9.50	15	5.3	6.7
030	208/60/1	16.2	14.1	73.0	1	22.0	2.10	1/3	1	19.73	30	0.0	0.0
030	208/60/1	21.8	14.1	73.0	1	22.0	2.10	1/3	1	27.26	30	4.1	19.7
030	230/60/1	16.2	14.1	73.0	1	22.0	2.10	1/3	1	19.73	30	0.0	0.0
030	230/60/1	23.8	14.1	73.0	1	22.0	2.10	1/3	1	29.80	30	5.0	21.7
030	220-240/50/1	19.5	16.7	79.0	1	26.0	2.77	1/2	1	23.65	40	0.0	0.0
030	220-240/50/1	29.9	13.5	72.0	1	21.0	2.77	1/2	1	37.42	40	6.5	27.2
030	265/60/1	12.7	11.2	60.0	1	17.5	1.53	1/3	1	15.53	25	0.0	0.0
030	265/60/1	26.4	11.2	60.0	1	17.5	1.53	1/3	1	33.04	35	6.6	24.9
030	208/60/3	11.0	8.9	58.0	1	13.9	2.10	1/3	1	13.23	20	0.0	0.0
030	208/60/3	13.5	8.9	58.0	1	13.9	2.10	1/3	1	16.85	20	4.1	11.4
030	230/60/3	11.0	8.9	58.0	1	13.9	2.10	1/3	1	13.23	20	0.0	0.0
030	230/60/3	14.7	8.9	58.0	1	13.9	2.10	1/3	1	18.31	20	5.0	12.6
030	380-415/50/3	7.5	5.8	38.0	1	9.0	1.70	1/2	1	8.95	15	0.0	0.0
030	380-415/50/3	10.8	5.8	38.0	1	9.0	1.70	1/2	1	13.46	15	6.5	9.1
030	460/60/3	5.2	4.2	28.0	1	6.5	0.95	1/3	1	6.20	15	0.0	0.0
030	460/60/3	9.2	4.2	28.0	1	6.5	0.95	1/3	1	11.54	15	6.6	8.3

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Table 103. Electrical data: standard static motors—½–5 tons (continued)

Model No.	Volts	Total Unit FLA	Comp RLA (ea)	Comp LRA (ea)	No. of Comp.	Cmp MCC	Blower Motor FLA	Blower Motor hp	Fan Motor Num.	Minimum Circuit Ampacity	Maximum Overcurrent Protective Device	Electric Heat kW	Electric Heat Amps
GEHE / GEVE													
036	208/60/1	20.3	16.7	79.0	1	26.0	3.60	1/2	1	24.48	40	0.0	0.0
036	208/60/1	27.2	16.7	79.0	1	26.0	3.60	1/2	1	33.95	40	4.9	23.6
036	230/60/1	20.3	16.7	79.0	1	26.0	3.60	1/2	1	24.48	40	0.0	0.0
036	230/60/1	29.7	16.7	79.0	1	26.0	3.60	1/2	1	37.11	40	6.0	26.1
036	265/60/1	16.3	13.5	72.0	1	21.0	2.77	1/2	1	19.65	30	0.0	0.0
036	265/60/1	32.8	13.5	72.0	1	21.0	2.77	1/2	1	40.96	45	8.0	30.0
036	208/60/3	14.0	10.4	73.0	1	16.3	3.60	1/2	1	16.60	25	0.0	0.0
036	208/60/3	17.2	10.4	73.0	1	16.3	3.60	1/2	1	21.50	25	4.9	13.6
036	230/60/3	14.0	10.4	73.0	1	16.3	3.60	1/2	1	16.60	25	0.0	0.0
036	230/60/3	18.7	10.4	73.0	1	16.3	3.60	1/2	1	23.33	25	6.0	15.1
036	380-415/50/3	7.7	6.0	44.0	1	9.3	1.70	1/2	1	9.20	15	0.0	0.0
036	380-415/50/3	11.6	6.0	44.0	1	9.3	1.70	1/2	1	14.56	15	7.2	9.9
036	460/60/3	7.5	5.8	38.0	1	9.0	1.70	1/2	1	8.95	15	0.0	0.0
036	460/60/3	11.7	5.8	38.0	1	9.0	1.70	1/2	1	14.60	15	8.0	10.0
GEHE / GEVE													
042	208/60/1	21.5	17.9	112.0	1	28.0	3.60	1/2	1	25.98	40	0.0	0.0
042	208/60/1	31.0	17.9	112.0	1	28.0	3.60	1/2	1	38.75	40	5.7	27.4
042	230/60/1	21.5	17.9	112.0	1	28.0	3.60	1/2	1	25.98	40	0.0	0.0
042	230/60/1	34.0	17.9	112.0	1	28.0	3.60	1/2	1	42.54	45	7.0	30.4
042	208/60/3	17.1	13.5	88.0	1	21.1	3.60	1/2	1	20.48	30	0.0	0.0
042	208/60/3	19.4	13.5	88.0	1	21.1	3.60	1/2	1	24.28	30	5.7	15.8
042	230/60/3	17.1	13.5	88.0	1	21.1	3.60	1/2	1	20.48	30	0.0	0.0
042	230/60/3	21.2	13.5	88.0	1	21.1	3.60	1/2	1	26.46	30	7.0	17.6
042	380-415/50/3	7.7	6.3	55.0	1	9.9	1.40	1/2	1	9.28	15	0.0	0.0
042	380-415/50/3	13.4	6.3	55.0	1	9.9	1.40	1/2	1	16.71	20	8.6	12.0
042	460/60/3	7.7	6.0	44.0	1	9.3	1.70	1/2	1	9.20	15	0.0	0.0
042	460/60/3	13.4	6.0	44.0	1	9.3	1.70	1/2	1	16.72	20	9.3	11.7
042	575/60/3	6.2	4.9	34.0	1	7.7	1.31	1/2	1	7.44	15	0.0	0.0
048	208/60/1	24.2	21.4	135.0	1	33.4	2.80	1/2	1	29.55	50	0.0	0.0
048	208/60/1	34.1	21.4	135.0	1	33.4	2.80	1/2	1	42.56	50	6.5	31.3
048	230/60/1	24.2	21.4	135.0	1	33.4	2.80	1/2	1	29.55	50	0.0	0.0
048	230/60/1	37.6	21.4	135.0	1	33.4	2.80	1/2	1	46.98	50	8.0	34.8
048	208/60/3	17.3	14.5	98.0	1	22.6	2.80	1/2	1	20.93	35	0.0	0.0
048	208/60/3	20.8	14.5	98.0	1	22.6	2.80	1/2	1	26.05	35	6.5	18.0
048	230/60/3	17.3	14.5	98.0	1	22.6	2.80	1/2	1	20.93	35	0.0	0.0
048	230/60/3	22.9	14.5	98.0	1	22.6	2.80	1/2	1	28.60	35	8.0	20.1
048	380-415/50/3	10.5	7.8	52.0	1	12.1	2.70	1	1	12.45	20	0.0	0.0
048	380-415/50/3	14.7	7.8	52.0	1	12.1	2.70	1	1	18.33	20	8.6	12.0
048	460/60/3	7.7	6.3	55.0	1	9.9	1.40	1/2	1	9.28	15	0.0	0.0
048	460/60/3	14.7	6.3	55.0	1	9.9	1.40	1/2	1	18.38	20	10.6	13.3

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Table 103. Electrical data: standard static motors—½–5 tons (continued)

Model No.	Volts	Total Unit FLA	Comp RLA (ea)	Comp LRA (ea)	No. of Comp.	Cmp MCC	Blower Motor FLA	Blower Motor hp	Fan Motor Num.	Minimum Circuit Ampacity	Maximum Overcurrent Protective Device	Electric Heat kW	Electric Heat Amps
048	575/60/3	7.4	6.0	41.0	1	9.4	1.40	1/2	1	8.90	15	0.0	0.0
060	208/60/1	31.7	26.3	134.0	1	41.0	5.40	1	1	38.28	60	0.0	0.0
060	208/60/1	36.7	26.3	134.0	1	41.0	5.40	1	1	45.81	60	6.5	31.3
060	230/60/1	31.7	26.3	134.0	1	41.0	5.40	1	1	38.28	60	0.0	0.0
060	230/60/1	40.2	26.3	134.0	1	41.0	5.40	1	1	50.23	60	8.0	34.8
060	208/60/3	21.0	15.6	110.0	1	24.4	5.40	1	1	24.90	40	0.0	0.0
060	208/60/3	23.4	15.6	110.0	1	24.4	5.40	1	1	29.30	40	6.5	18.0
060	230/60/3	21.0	15.6	110.0	1	24.4	5.40	1	1	24.90	40	0.0	0.0
060	230/60/3	25.5	15.6	110.0	1	24.4	5.40	1	1	31.85	40	8.0	20.1
060	380-415/50/3	12.3	9.6	75.0	1	15.0	2.70	1	1	14.70	20	0.0	0.0
060	380-415/50/3	14.7	9.6	75.0	1	15.0	2.70	1	1	18.33	20	8.6	12.0
060	460/60/3	10.5	7.8	52.0	1	12.1	2.70	1	1	12.45	20	0.0	0.0
060	460/60/3	16.0	7.8	52.0	1	12.1	2.70	1	1	20.01	25	10.6	13.3
060	575/60/3	8.0	5.8	38.9	1	9.1	2.20	1	1	9.45	15	0.0	0.0

Table 104. Electrical data: High static motors—½–5 tons

Model No.	Volts	Total Unit FLA	Comp RLA (ea)	Comp LRA (ea)	No. of Comp.	Cmp MCC	Blower Motor FLA	Blower Motor hp	Fan Motor Num.	Minimum Circuit Ampacity	Maximum Overcurrent Protective Device	Electric Heat kW	Electric Heat Amps
GEHE / GEVE													
006	115/60/1	6.8	5.6	30.0	1	7.5	1.20	1/12	1	8.20	15	0.0	0.0
006	208/60/1	3.9	3.3	14.0	1	4.2	0.60	1/12	1	4.73	15	0.0	0.0
006	208/60/1	4.5	3.3	14.0	1	4.2	0.60	1/12	1	5.68	15	0.8	3.9
006	230/60/1	3.8	3.2	15.0	1	4.2	0.60	1/12	1	4.60	15	0.0	0.0
006	230/60/1	4.9	3.2	15.0	1	4.2	0.60	1/12	1	6.18	15	1.0	4.3
006	220-240/50/1	3.4	2.9	17.0	1	4.0	0.52	1/12	1	4.15	15	0.0	0.0
006	220-240/50/1	7.4	2.9	17.0	1	4.0	0.52	1/12	1	9.19	15	1.6	6.8
006	265/60/1	3.0	2.5	11.0	1	3.5	0.52	1/12	1	3.65	15	0.0	0.0
006	265/60/1	5.5	2.5	11.0	1	3.5	0.52	1/12	1	6.92	15	1.3	5.0
009	115/60/1	7.6	6.4	36.0	1	8.6	1.20	1/12	1	9.20	15	0.0	0.0
009	208/60/1	4.3	3.7	16.0	1	4.8	0.60	1/12	1	5.23	15	0.0	0.0
009	208/60/1	6.5	3.7	16.0	1	4.8	0.60	1/12	1	8.14	15	1.2	5.9
009	230/60/1	4.1	3.5	17.0	1	4.8	0.60	1/12	1	4.98	15	0.0	0.0
009	230/60/1	7.1	3.5	17.0	1	4.8	0.60	1/12	1	8.90	15	1.5	6.5
009	220-240/50/1	6.0	5.3	23.0	1	7.4	0.72	1/8	1	7.35	15	0.0	0.0
009	220-240/50/1	9.8	5.3	23.0	1	7.4	0.72	1/8	1	12.20	15	2.2	9.0
009	265/60/1	3.3	2.8	13.0	1	3.7	0.52	1/12	1	4.02	15	0.0	0.0
009	265/60/1	8.1	2.8	13.0	1	3.7	0.52	1/12	1	10.08	15	2.0	7.5
012	115/60/1	13.7	12.1	58.0	1	16.9	1.57	1/8	1	16.70	25	0.0	0.0
012	208/60/1	7.0	6.3	30.0	1	8.8	0.70	1/8	1	8.58	15	0.0	0.0
012	208/60/1	8.5	6.3	27.0	1	8.8	0.70	1/8	1	10.67	15	1.6	7.8

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Table 104. Electrical data: High static motors—½–5 tons (continued)

Model No.	Volts	Total Unit FLA	Comp RLA (ea)	Comp LRA (ea)	No. of Comp.	Cmp MCC	Blower Motor FLA	Blower Motor hp	Fan Motor Num.	Minimum Circuit Ampacity	Maximum Overcurrent Protective Device	Electric Heat kW	Electric Heat Amps
GEHE / GEVE													
012	230/60/1	7.0	6.3	30.0	1	8.8	0.70	1/8	1	8.58	15	0.0	0.0
012	230/60/1	9.4	6.3	30.0	1	8.8	0.70	1/8	1	11.74	15	2.0	8.7
012	220-240/50/1	7.4	6.7	30.0	1	9.4	0.72	1/8	1	9.10	15	0.0	0.0
012	220-240/50/1	12.0	6.7	30.0	1	9.4	0.72	1/8	1	14.96	15	2.7	11.3
012	265/60/1	5.7	5.0	23.0	1	7.0	0.72	1/8	1	6.97	15	0.0	0.0
012	265/60/1	10.7	5.0	23.0	1	7.0	0.72	1/8	1	13.40	15	2.7	10.0
015	208/60/1	8.6	7.9	36.0	1	11.1	0.70	1/8	1	10.58	15	0.0	0.0
015	208/60/1	10.3	7.9	36.0	1	11.1	0.70	1/8	1	12.89	15	2.0	9.6
015	230/60/1	8.6	7.9	36.0	1	11.1	0.70	1/8	1	10.58	15	0.0	0.0
015	230/60/1	11.6	7.9	36.0	1	11.1	0.70	1/8	1	14.46	15	2.5	10.9
015	220-240/50/1	9.7	8.2	36.0	1	11.5	1.53	1/3	1	11.78	15	0.0	0.0
015	220-240/50/1	15.2	8.2	36.0	1	11.5	1.53	1/3	1	19.00	20	3.3	13.7
015	265/60/1	7.1	6.4	30.0	1	9.0	0.72	1/8	1	8.72	15	0.0	0.0
015	265/60/1	13.2	6.4	30.0	1	9.0	0.72	1/8	1	16.47	20	3.3	12.5
018	208/60/1	11.7	9.6	42.0	1	13.4	2.10	1/3	1	14.10	20	0.0	0.0
018	208/60/1	13.9	9.6	42.0	1	13.4	2.10	1/3	1	17.41	20	2.5	11.8
018	230/60/1	11.7	9.6	42.0	1	13.4	2.10	1/3	1	14.10	20	0.0	0.0
018	230/60/1	15.1	9.6	42.0	1	13.4	2.10	1/3	1	18.93	20	3.0	13.0
018	220-240/50/1	11.1	9.6	54.0	1	15.0	1.53	1/3	1	13.53	20	0.0	0.0
018	220-240/50/1	19.7	9.6	54.0	1	15.0	1.53	1/3	1	24.57	25	4.4	18.1
018	265/60/1	9.2	7.7	35.0	1	10.8	1.53	1/3	1	11.16	15	0.0	0.0
018	265/60/1	16.6	7.7	35.0	1	10.8	1.53	1/3	1	20.78	25	4.0	15.1
018	380-415/50/3	5.2	4.2	28.0	1	6.5	0.95	1/3	1	6.20	15	0.0	0.0
018	380-415/50/3	7.0	3.6	28.0	1	5.6	0.95	1/3	1	8.75	15	4.4	6.1
024	208/60/1	14.9	12.8	58.3	1	20.0	2.10	1/3	1	18.10	30	0.0	0.0
024	208/60/1	17.8	12.8	58.3	1	20.0	2.10	1/3	1	22.22	30	3.3	15.7
024	230/60/1	14.9	12.8	58.3	1	20.0	2.10	1/3	1	18.10	30	0.0	0.0
024	230/60/1	19.5	12.8	58.3	1	20.0	2.10	1/3	1	24.36	30	4.0	17.4
024	220-240/50/1	12.7	11.2	60.0	1	17.5	1.53	1/3	1	15.53	25	0.0	0.0
024	220-240/50/1	24.0	11.2	60.0	1	17.5	1.53	1/3	1	30.04	35	5.4	22.5
024	265/60/1	11.1	9.6	54.0	1	15.0	1.53	1/3	1	13.53	20	0.0	0.0
024	265/60/1	21.5	9.6	54.0	1	15.0	1.53	1/3	1	26.91	30	5.3	20.0
024	208/60/3	9.2	7.7	53.7	1	12.0	1.53	1/3	1	11.16	15	0.0	0.0
024	208/60/3	10.6	7.7	53.7	1	12.0	1.53	1/3	1	13.22	15	3.3	9.0
024	230/60/3	9.8	7.7	53.7	1	12.0	2.10	1/3	1	11.73	15	0.0	0.0
024	230/60/3	12.1	7.7	53.7	1	12.0	2.10	1/3	1	15.18	20	4.0	10.0
024	380-415/50/3	5.2	4.2	28.0	1	6.5	0.95	1/3	1	6.20	15	0.0	0.0
024	380-415/50/3	8.5	4.2	28.0	1	6.5	0.95	1/3	1	10.58	15	5.4	7.5
024	460/60/3	4.6	3.6	28.0	1	5.6	0.95	1/3	1	5.45	15	0.0	0.0
024	460/60/3	7.6	3.6	28.0	1	5.6	0.95	1/3	1	9.50	15	5.3	6.7

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Table 104. Electrical data: High static motors—½–5 tons (continued)

Model No.	Volts	Total Unit FLA	Comp RLA (ea)	Comp LRA (ea)	No. of Comp.	Cmp MCC	Blower Motor FLA	Blower Motor hp	Fan Motor Num.	Minimum Circuit Ampacity	Maximum Overcurrent Protective Device	Electric Heat kW	Electric Heat Amps
GEHE / GEVE													
030	208/60/1	16.2	14.1	73.0	1	22.0	2.10	1/3	1	19.73	30	0.0	0.0
030	208/60/1	21.8	14.1	73.0	1	22.0	2.10	1/3	1	27.26	30	4.1	19.7
030	230/60/1	16.2	14.1	73.0	1	22.0	2.10	1/3	1	19.73	30	0.0	0.0
030	230/60/1	23.8	14.1	73.0	1	22.0	2.10	1/3	1	29.80	30	5.0	21.7
030	220-240/50/1	19.5	16.7	79.0	1	26.0	2.77	1/2	1	23.65	40	0.0	0.0
030	220-240/50/1	29.9	13.5	72.0	1	21.0	2.77	1/2	1	37.42	40	6.5	27.2
030	265/60/1	12.7	11.2	60.0	1	17.5	1.53	1/3	1	15.53	25	0.0	0.0
030	265/60/1	26.4	11.2	60.0	1	17.5	1.53	1/3	1	33.04	35	6.6	24.9
030	208/60/3	11.0	8.9	58.0	1	13.9	2.10	1/3	1	13.23	20	0.0	0.0
030	208/60/3	13.5	8.9	58.0	1	13.9	2.10	1/3	1	16.85	20	4.1	11.4
030	230/60/3	11.0	8.9	58.0	1	13.9	2.10	1/3	1	13.23	20	0.0	0.0
030	230/60/3	14.7	8.9	58.0	1	13.9	2.10	1/3	1	18.31	20	5.0	12.6
030	380-415/50/3	7.5	5.8	38.0	1	9.0	1.70	1/2	1	8.95	15	0.0	0.0
030	380-415/50/3	10.8	5.8	38.0	1	9.0	1.70	1/2	1	13.46	15	6.5	9.1
030	460/60/3	5.2	4.2	28.0	1	6.5	0.95	1/3	1	6.20	15	0.0	0.0
030	460/60/3	9.2	4.2	28.0	1	6.5	0.95	1/3	1	11.54	15	6.6	8.3
036	208/60/1	20.3	16.7	79.0	1	26.0	3.60	1/2	1	24.48	40	0.0	0.0
036	208/60/1	27.2	16.7	79.0	1	26.0	3.60	1/2	1	33.95	40	4.9	23.6
036	230/60/1	20.3	16.7	79.0	1	26.0	3.60	1/2	1	24.48	40	0.0	0.0
036	230/60/1	29.7	16.7	79.0	1	26.0	3.60	1/2	1	37.11	40	6.0	26.1
036	265/60/1	16.3	13.5	72.0	1	21.0	2.77	1/2	1	19.65	30	0.0	0.0
036	265/60/1	32.8	13.5	72.0	1	21.0	2.77	1/2	1	40.96	45	8.0	30.0
036	208/60/3	14.0	10.4	73.0	1	16.3	3.60	1/2	1	16.60	25	0.0	0.0
036	208/60/3	17.2	10.4	73.0	1	16.3	3.60	1/2	1	21.50	25	4.9	13.6
036	230/60/3	14.0	10.4	73.0	1	16.3	3.60	1/2	1	16.60	25	0.0	0.0
036	230/60/3	18.7	10.4	73.0	1	16.3	3.60	1/2	1	23.33	25	6.0	15.1
036	380-415/50/3	7.7	6.0	44.0	1	9.3	1.70	1/2	1	9.20	15	0.0	0.0
036	380-415/50/3	11.6	6.0	44.0	1	9.3	1.70	1/2	1	14.56	15	7.2	9.9
036	460/60/3	7.5	5.8	38.0	1	9.0	1.70	1/2	1	8.95	15	0.0	0.0
036	460/60/3	11.7	5.8	38.0	1	9.0	1.70	1/2	1	14.60	15	8.0	10.0
042	208/60/1	21.5	17.9	112.0	1	28.0	3.60	1/2	1	25.98	40	0.0	0.0
042	208/60/1	31.0	17.9	112.0	1	28.0	3.60	1/2	1	38.75	40	5.7	27.4
042	230/60/1	21.5	17.9	112.0	1	28.0	3.60	1/2	1	25.98	40	0.0	0.0
042	230/60/1	34.0	17.9	112.0	1	28.0	3.60	1/2	1	42.54	45	7.0	30.4
042	208/60/3	17.1	13.5	88.0	1	21.1	3.60	1/2	1	20.48	30	0.0	0.0
042	208/60/3	19.4	13.5	88.0	1	21.1	3.60	1/2	1	24.28	30	5.7	15.8
042	230/60/3	17.1	13.5	88.0	1	21.1	3.60	1/2	1	20.48	30	0.0	0.0
042	230/60/3	21.2	13.5	88.0	1	21.1	3.60	1/2	1	26.46	30	7.0	17.6
042	380-415/50/3	9.0	6.3	55.0	1	9.9	2.70	1	1	10.58	15	0.0	0.0
042	380-415/50/3	14.7	6.3	55.0	1	9.9	2.70	1	1	18.33	20	8.6	12.0

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Table 104. Electrical data: High static motors—½–5 tons (continued)

Model No.	Volts	Total Unit FLA	Comp RLA (ea)	Comp LRA (ea)	No. of Comp.	Cmp MCC	Blower Motor FLA	Blower Motor hp	Fan Motor Num.	Minimum Circuit Ampacity	Maximum Overcurrent Protective Device	Electric Heat kW	Electric Heat Amps
GEHE / GEVE													
042	460/60/3	7.7	6.0	44.0	1	9.3	1.70	1/2	1	9.20	15	0.0	0.0
042	460/60/3	13.4	6.0	44.0	1	9.3	1.70	1/2	1	16.72	20	9.3	11.7
042	575/60/3	6.2	4.9	34.0	1	7.7	1.31	1/2	1	7.44	15	0.0	0.0
048	208/60/1	26.8	21.4	135.0	1	33.4	5.40	1	1	32.15	50	0.0	0.0
048	208/60/1	36.7	21.4	135.0	1	33.4	5.40	1	1	45.81	50	6.5	31.3
048	230/60/1	26.8	21.4	135.0	1	33.4	5.40	1	1	32.15	50	0.0	0.0
048	230/60/1	40.2	21.4	135.0	1	33.4	5.40	1	1	50.23	60	8.0	34.8
048	208/60/3	19.9	14.5	98.0	1	22.6	5.40	1	1	23.53	35	0.0	0.0
048	208/60/3	23.4	14.5	98.0	1	22.6	5.40	1	1	29.30	35	6.5	18.0
048	230/60/3	19.9	14.5	98.0	1	22.6	5.40	1	1	23.53	35	0.0	0.0
048	230/60/3	25.5	14.5	98.0	1	22.6	5.40	1	1	31.85	35	8.0	20.1
048	380-415/50/3	10.5	7.8	52.0	1	12.1	2.70	1	1	12.45	20	0.0	0.0
048	380-415/50/3	14.7	7.8	52.0	1	12.1	2.70	1	1	18.33	20	8.6	12.0
048	460/60/3	9.0	6.3	55.0	1	9.9	2.70	1	1	10.58	15	0.0	0.0
048	460/60/3	16.0	6.3	55.0	1	9.9	2.70	1	1	20.01	25	10.6	13.3
048	575/60/3	8.2	6.0	41.0	1	9.4	2.20	1	1	9.70	15	0.0	0.0
060	208/60/1	31.7	26.3	134.0	1	41.0	5.40	1	1	38.28	60	0.0	0.0
060	208/60/1	36.7	26.3	134.0	1	41.0	5.40	1	1	45.81	60	6.5	31.3
060	230/60/1	31.7	26.3	134.0	1	41.0	5.40	1	1	38.28	60	0.0	0.0
060	230/60/1	40.2	26.3	134.0	1	41.0	5.40	1	1	50.23	60	8.0	34.8
060	208/60/3	21.0	15.6	110.0	1	24.4	5.40	1	1	24.90	40	0.0	0.0
060	208/60/3	23.4	15.6	110.0	1	24.4	5.40	1	1	29.30	40	6.5	18.0
060	230/60/3	21.0	15.6	110.0	1	24.4	5.40	1	1	24.90	40	0.0	0.0
060	230/60/3	25.5	15.6	110.0	1	24.4	5.40	1	1	31.85	40	8.0	20.1
060	380-415/50/3	12.3	9.6	75.0	1	15.0	2.70	1	1	14.70	20	0.0	0.0
060	380-415/50/3	14.7	9.6	75.0	1	15.0	2.70	1	1	18.33	20	8.6	12.0
060	460/60/3	10.5	7.8	52.0	1	12.1	2.70	1	1	12.45	20	0.0	0.0
060	460/60/3	16.0	7.8	52.0	1	12.1	2.70	1	1	20.01	25	10.6	13.3
060	575/60/3	8.0	5.8	38.9	1	9.1	2.20	1	1	9.45	15	0.0	0.0

Table 105. Electrical data - minimum and maximum

Digit 8	Rated Voltage	Hz	Ph	Minimum Utilization Voltage	Maximum Utilization Voltage
0	115	60	1	104	126
1	208	60	1	197	229
2	230	60	1	207	253
3	208	60	3	187	229
4	460	60	3	414	506

Digit 8	Rated Voltage	Hz	Ph	Minimum Utilization Voltage	Maximum Utilization Voltage
5	575	60	3	518	633
6	220-240	50	1	198	264
7	265	60	1	239	292
8	230	60	3	207	253
9	380-415	60	3	342	456

Dimensional Data

Figure 11. Left return/left supply

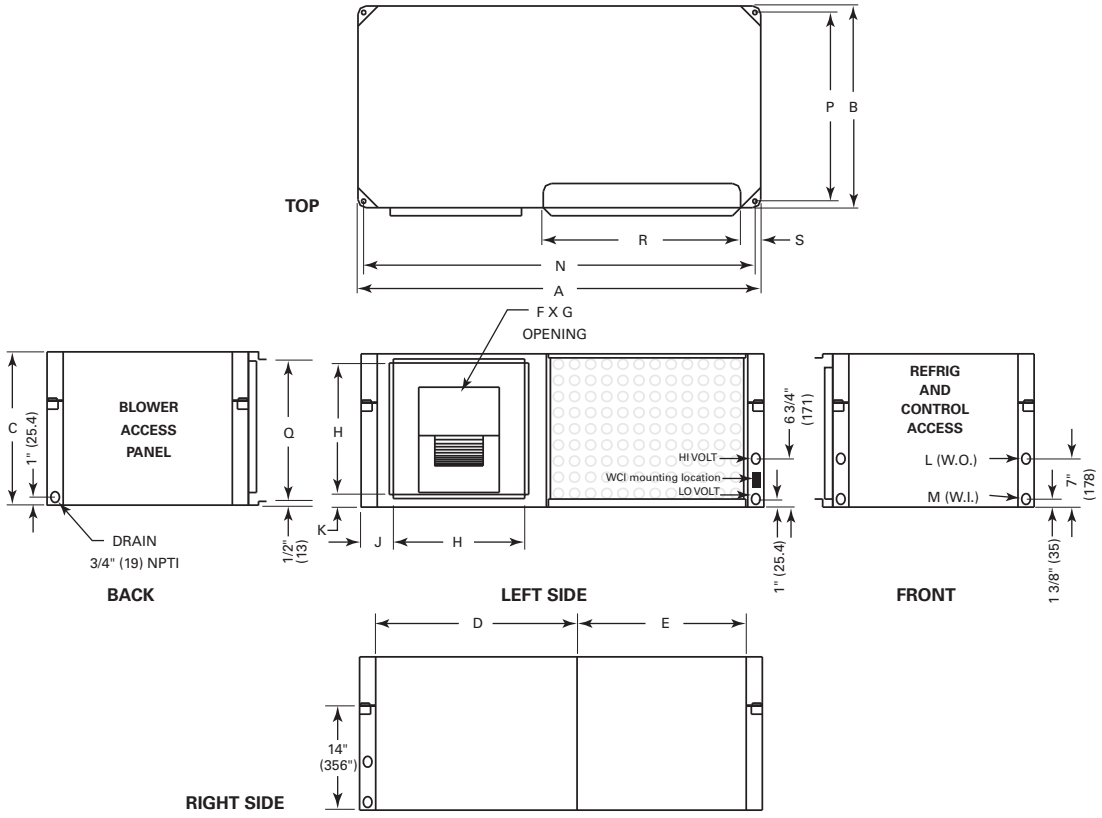


Table 106. Dimensional data—left return/left supply

Unit	A	B	C	D[a]	E	F x G	H	J	K	LNPTI	MNPTI	N	P	Q	R[b]	S
006, 009	40 (1016)	20 (508)	15 (381)	20 (508)	15 (381)	6-7/8 x 8 (175) x (203)	11-1/2 (292)	4-1/2 (114)	1-3/4 (45)	1/2 (13)	1/2 (13)	38-3/4 (984)	18-3/4 (476)	13-5/8 (346)	18-1/2 (470)	3-1/4 (83)
012, 015	40 (1016)	20 (508)	15 (381)	20 (508)	15 (381)	6-7/8 x 9-7/8 (175) x (251)	11-1/2 (292)	4-1/4 (108)	3/4 (19)	1/2 (13)	1/2 (13)	38-3/4 (984)	18-3/4 (476)	13-5/8 (346)	18-1/2 (470)	3-1/4 (83)
018	46 (1168)	23 (584)	18 (457)	23 (584)	18 (457)	8-1/4 x 9-3/4 (210) x (248)	13-1/2 (343)	4-3/4 (121)	1-3/8 (35)	3/4 (19)	3/4 (19)	44-3/4 (1137)	21-3/4 (552)	16-5/8 (422)	18-1/2 (470)	4-1/4 (108)
024, 030	46 (1168)	23 (584)	18 (457)	23 (584)	18 (457)	8-1/4 x 11-3/8 (210) x (289)	13-1/2 (343)	4-3/4 (121)	1-3/8 (35)	3/4 (19)	3/4 (19)	44-3/4 (1137)	21-3/4 (552)	16-5/8 (422)	18-1/2 (597)	4-1/4 (108)
036, 042	50 (1270)	25 (635)	19 (483)	25 (635)	20 (508)	10-1/2 x 13-1/2 (267) x (343)	17 (432)	4 (102)	1 (25)	3/4 (19)	3/4 (19)	48-3/4 (1238)	23-3/4 (603)	17-5/8 (448)	23-1/2 (597)	3-1/4 (83)
Std-048	58 (1473)	33 (838)	21 (533)	29-1/2 (597)	23-1/2 (749)	13-1/8 x 11-3/8 (333) x (289)	18 (457)	5-1/4 (133)	1-1/2 (38)	1 (25)	1 (25)	56-3/4 (1441)	31-3/4 (806)	19-5/8 (498)	23-1/2 (597)	5-1/2 (140)
Hi-048, 060	58 (1473)	33 (838)	21 (533)	29-1/2 (597)	23-1/2 (749)	13-7/8 x 13-7/8 (352) x (352)	18 (457)	5-1/4 (133)	1-1/2 (38)	1 (25)	1 (25)	56-3/4 (1441)	31-3/4 (806)	19-5/8 (498)	23-1/2 (597)	5-1/2 (140)

Notes:

1. All dimensions are in inches followed by millimeters in parenthesis.
2. Access to the unit for service purposes should be provided at installation. All configurations require an 18 in. surround clearance from other mechanical and electrical equipment to enable panel removal from the unit for service/maintenance ability. Local and/or NEC codes require greater service clearance. Check all code requirements prior to unit installation. Installer is responsible for following all local and NEC code requirements.
3. Forklift is recommended when rigging the unit. If hot gas reheat is specified for a size 018 or 024, the actual cabinet size increases to an 036 cabinet.
4. When a horizontal model is ordered with same side return and supply in a ducted application, bottom filter removal is required due to limited access on either side of the filter.

(a) Return air opening dimension.
(b) Filter rack dimension.

Figure 12. Left return/back supply

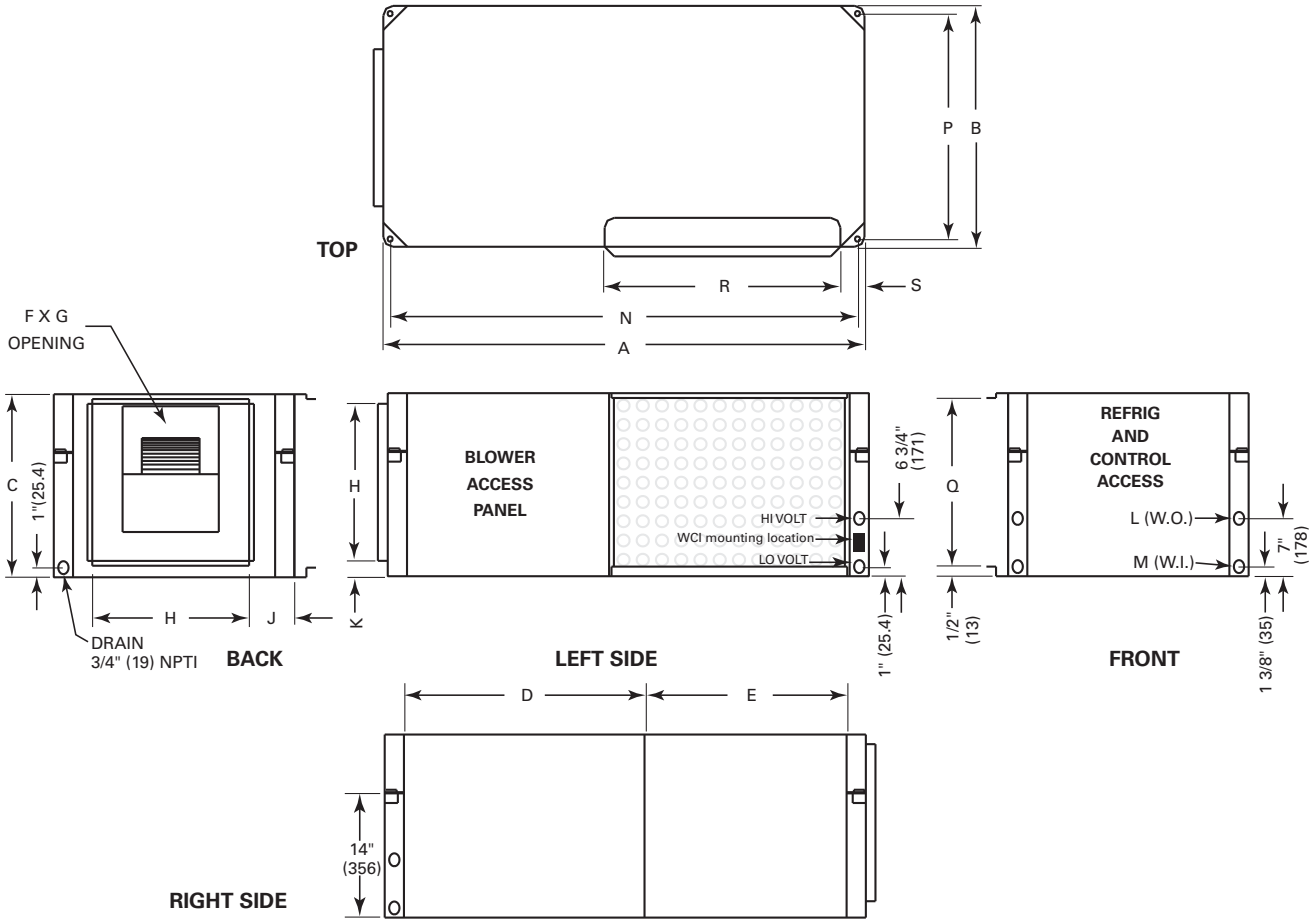


Table 107. Dimensional data—left return/back supply

Unit	A	B	C	D[a]	E	F x G	H	J	K	LNPTI	MNPTI	N	P	Q	R[b]	S
006, 009	40 (1016)	20 (508)	15 (381)	20 (508)	15 (381)	6-7/8 x 8 (175) x (203)	11-1/2 (292)	4-1/2 (114)	1-3/4 (45)	1/2 (13)	1/2 (13)	38-3/4 (984)	18-3/4 (476)	13-5/8 (346)	18-1/2 (470)	3-1/4 (83)
012, 015	40 (1016)	20 (508)	15 (381)	20 (508)	15 (381)	6-7/8 x 9-7/8 (175) x (251)	11-1/2 (292)	4-1/4 (108)	2-3/4 (70)	1/2 (13)	1/2 (13)	38-3/4 (984)	18-3/4 (476)	13-5/8 (346)	18-1/2 (470)	3-1/4 (83)
018	46 (1168)	23 (584)	18 (457)	23 (584)	18 (457)	8-1/4 x 9-3/4 (210) x (248)	13-1/2 (343)	4-3/4 (121)	3-1/4 (83)	3/4 (19)	3/4 (19)	44-3/4 (1137)	21-3/4 (552)	16-5/8 (422)	18-1/2 (470)	4-1/4 (108)
024, 030	46 (1168)	23 (584)	18 (457)	23 (584)	18 (457)	8-1/4 x 11-3/8 (210) x (289)	13-1/2 (343)	4-3/4 (121)	3-1/4 (83)	3/4 (19)	3/4 (19)	44-3/4 (1137)	21-3/4 (552)	16-5/8 (422)	18-1/2 (597)	4-1/4 (108)
036, 042	50 (1270)	25 (635)	19 (483)	25 (635)	20 (508)	10-1/2 x 13-1/2 (267) x (343)	17 (432)	4 (102)	1 (25)	3/4 (19)	3/4 (19)	48-3/4 (1238)	23-3/4 (603)	17-5/8 (448)	23-1/2 (597)	3-1/4 (83)
Std-048	58 (1473)	33 (838)	21 (533)	29-1/2 (597)	23-1/2 (749)	13-1/8 x 11-3/8 (333) x (289)	18 (457)	9-3/4 (248)	1-1/2 (38)	1 (25)	1 (25)	56-3/4 (1441)	31-3/4 (806)	19-5/8 (498)	23-1/2 (597)	5-1/2 (140)
Hi-048, 060	58 (1473)	33 (838)	21 (533)	29-1/2 (597)	23-1/2 (749)	13-7/8 x 13-7/8 (352) x (352)	18 (457)	9-3/4 (248)	1-1/2 (38)	1 (25)	1 (25)	56-3/4 (1441)	31-3/4 (806)	19-5/8 (498)	23-1/2 (597)	5-1/2 (140)

Notes:
1. All dimensions are in inches followed by millimeters in parenthesis.
2. Access to the unit for service purposes should be provided at installation. All configurations require an 18 in. surround clearance from other mechanical and electrical equipment to enable panel removal from the unit for service/maintenance ability. Local and/or NEC codes require greater service clearance. Check all code requirements prior to unit installation. Installer is responsible for following all local and NEC code requirements.
3. Forklift is recommended when rigging the unit. If hot gas reheat is specified for a size 018 or 024, the actual cabinet size increases to an 036 cabinet.

(a) Return air opening dimension
(b) Filter rack dimension

Figure 13. Left return/right supply

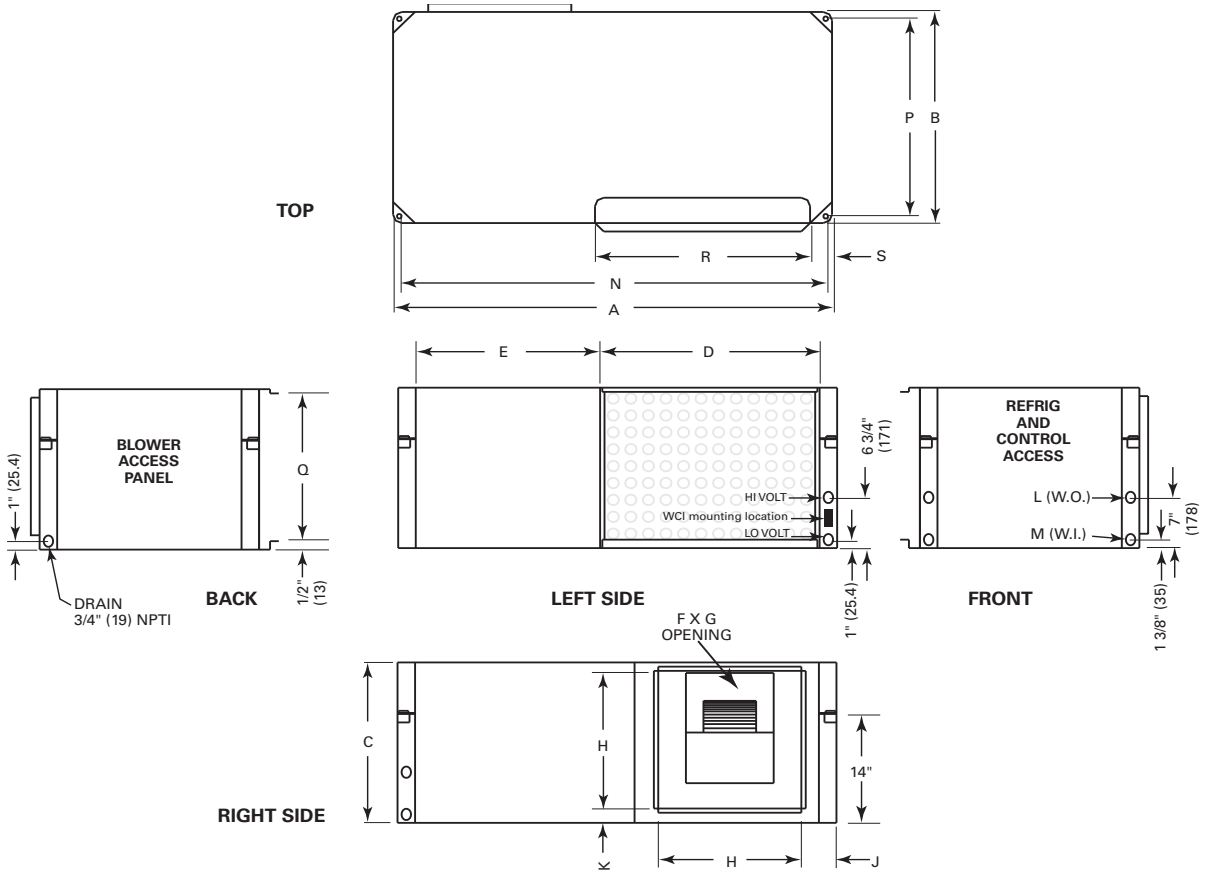


Table 108. Dimensional data—left return/right supply

Unit	A	B	C	D[a]	E	F x G	H	J	K	LNPTI	MNPTI	N	P	Q	R[b]	S
006, 009	40 (1016)	20 (508)	15 (381)	20 (508)	15 (381)	6-7/8 x 8 (175) x (203)	11-1/2 (292)	4-1/2 (114)	1-3/4 (45)	1/2 (13)	1/2 (13)	38-3/4 (984)	18-3/4 (476)	13-5/8 (346)	18-1/2 (470)	3-1/4 (83)
012, 015	40 (1016)	20 (508)	15 (381)	20 (508)	15 (381)	6-7/8 x 9-7/8 (175) x (251)	11-1/2 (292)	4-1/4 (108)	2-3/4 (70)	1/2 (13)	1/2 (13)	38-3/4 (984)	18-3/4 (476)	13-5/8 (346)	18-1/2 (470)	3-1/4 (83)
018	46 (1168)	23 (584)	18 (457)	23 (584)	18 (457)	8-1/4 x 9-3/4 (210) x (248)	13-1/2 (343)	4-3/4 (121)	3-1/4 (83)	3/4 (19)	3/4 (19)	44-3/4 (1137)	21-3/4 (552)	16-5/8 (422)	18-1/2 (470)	4-1/4 (108)
024, 030	46 (1168)	23 (584)	18 (457)	23 (584)	18 (457)	8-1/4 x 11-3/8 (210) x (289)	13-1/2 (343)	4-3/4 (121)	3-1/4 (83)	3/4 (19)	3/4 (19)	44-3/4 (1137)	21-3/4 (552)	16-5/8 (422)	18-1/2 (597)	4-1/4 (108)
036, 042	50 (1270)	25 (635)	19 (483)	25 (635)	20 (508)	10-1/2 x 13-1/2 (267) x (343)	17 (432)	4 (102)	1 (25)	3/4 (19)	3/4 (19)	48-3/4 (1238)	23-3/4 (603)	17-5/8 (448)	23-1/2 (597)	3-1/4 (83)
Std-048	58 (1473)	33 (838)	21 (533)	29-1/2 (597)	23-1/2 (749)	13-1/8 x 11-3/8 (333) x (289)	18 (457)	5-1/4 (133)	1-1/2 (38)	1 (25)	1 (25)	56-3/4 (1441)	31-3/4 (806)	19-5/8 (498)	23-1/2 (597)	5-1/2 (140)
Hi-048, 060	58 (1473)	33 (838)	21 (533)	29-1/2 (597)	23-1/2 (749)	13-7/8 x 13-7/8 (352) x (352)	18 (457)	5-1/4 (133)	1-1/2 (38)	1 (25)	1 (25)	56-3/4 (1441)	31-3/4 (806)	19-5/8 (498)	23-1/2 (597)	5-1/2 (140)

Notes:
1. All dimensions are in inches followed by millimeters in parenthesis.
2. Access to the unit for service purposes should be provided at installation. All configurations require an 18 in. surround clearance from other mechanical and electrical equipment to enable panel removal from the unit for service/maintenance ability. Local and/or NEC codes require greater service clearance. Check all code requirements prior to unit installation. Installer is responsible for following all local and NEC code requirements.
3. Forklift is recommended when rigging the unit. If hot gas reheat is specified for a size 018 or 024, the actual cabinet size increases to an 036 cabinet.

(a) Return air opening dimension
(b) Filter rack dimension

Figure 14. Right return/left supply

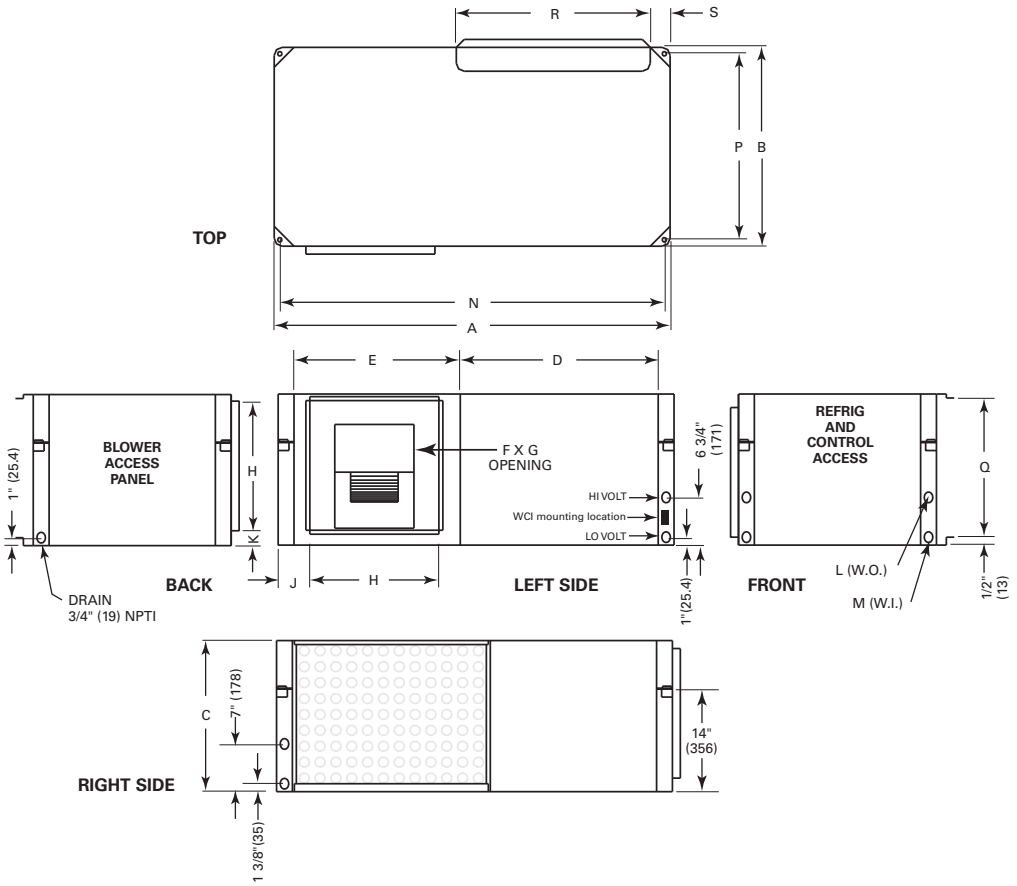


Table 109. Dimensional data—right return/left supply

Unit	A	B	C	D[a]	E	F x G	H	J	K	LNPTI	MNPTI	N	P	Q	R[b]	S
006, 009	40 (1016)	20 (508)	15 (381)	20 (508)	15 (381)	6-7/8 x 8 (175) x (203)	11-1/2 (292)	4-1/2 (114)	1-3/4 (45)	1/2 (13)	1/2 (13)	38-3/4 (984)	18-3/4 (476)	13-5/8 (346)	18-1/2 (470)	3-1/4 (83)
012, 015	40 (1016)	20 (508)	15 (381)	20 (508)	15 (381)	6-7/8 x 9-7/8 (175) x (251)	11-1/2 (292)	4-1/4 (108)	3/4 (19)	1/2 13)	1/2 (13)	38-3/4 (984)	18-3/4 (476)	13-5/8 (346)	18-1/2 (470)	3-1/4 (83)
018	46 (1168)	23 (584)	18 (457)	23 (584)	18 (457)	8-1/4 x 9-3/4 (210) x (248)	13-1/2 (343)	4-3/4 (121)	1-3/8 (35)	3/4 (19)	3/4 (19)	44-3/4 (1137)	21-3/4 (552)	16-5/8 (422)	18-1/2 (470)	4-1/4 (108)
024, 030	46 (1168)	23 (584)	18 (457)	23 (584)	18 (457)	8-1/4 x 11-3/8 (210) x (289)	13-1/2 (343)	4-3/4 (121)	1-3/8 (35)	3/4 (19)	3/4 (19)	44-3/4 (1137)	21-3/4 (552)	16-5/8 (422)	18-1/2 (597)	4-1/4 (108)
036, 042	50 (1270)	25 (635)	19 (483)	25 (635)	20 (508)	10-1/2 x 13-1/2 (267) x (343)	17 (432)	4 (102)	1 (25)	3/4 (19)	3/4 (19)	48-3/4 (1238)	23-3/4 (603)	17-5/8 (448)	23-1/2 (597)	3-1/4 (83)
Std-048	58 (1473)	33 (838)	21 (533)	29-1/2 (597)	23-1/2 (749)	13-1/8 x 11-3/8 (333) x (289)	18 (457)	5-1/4 (133)	1-1/2 (38)	1 (25)	1 (25)	56-3/4 (1441)	31-3/4 (806)	19-5/8 (498)	23-1/2 (597)	5-1/2 (140)
Hi-048, 060	58 (1473)	33 (838)	21 (533)	29-1/2 (597)	23-1/2 (749)	13-7/8 x 13-7/8 (352) x (352)	18 (457)	5-1/4 (133)	1-1/2 (38)	1 (25)	1 (25)	56-3/4 (1441)	31-3/4 (806)	19-5/8 (498)	23-1/2 (597)	5-1/2 (140)

Notes:

1. All dimensions are in inches followed by millimeters in parenthesis.
2. Access to the unit for service purposes should be provided at installation. All configurations require an 18 in. surround clearance from other mechanical and electrical equipment to enable panel removal from the unit for service/maintenance ability. Local and/or NEC codes require greater service clearance. Check all code requirements prior to unit installation. Installer is responsible for following all local and NEC code requirements.
3. Forklift is recommended when rigging the unit. If hot gas reheat is specified for a size 018 or 024, the actual cabinet size increases to an 036 cabinet.

(a) Return air opening dimension
(b) Filter rack dimension

Dimensional Data

Figure 15. Right return/back supply

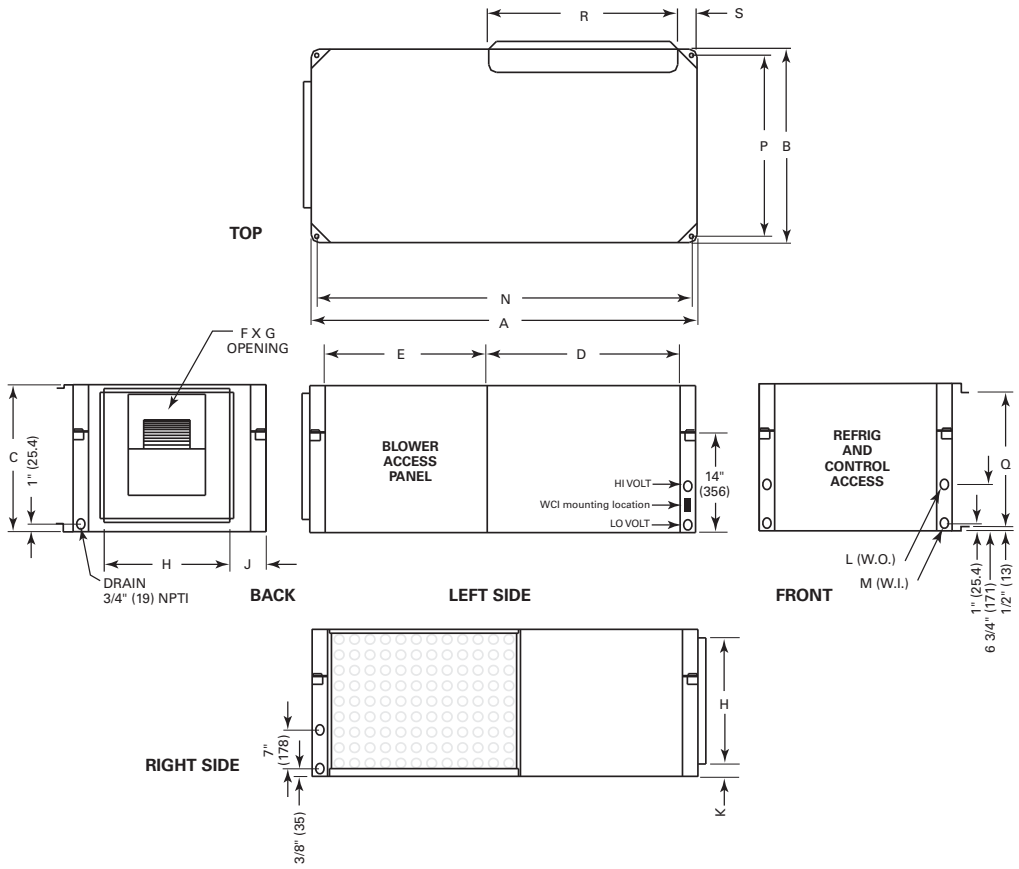


Table 110. Dimensional data—right return/back supply

Unit	A	B	C	D[a]	E	F x G	H	J	K	LNPTI	MNPTI	N	P	Q	R[b]	S
006, 009	40 (1016)	20 (508)	15 (381)	20 (508)	15 (381)	6-7/8 x 8 (175) x (203)	11-1/2 (292)	4-1/2 (114)	1-3/4 (45)	1/2 (13)	1/2 (13)	38-3/4 (984)	18-3/4 (476)	13-5/8 (346)	18-1/2 (470)	3-1/4 (83)
012, 015	40 (1016)	20 (508)	15 (381)	20 (508)	15 (381)	6-7/8 x 9-7/8 (175) x (251)	11-1/2 (292)	4-1/4 (108)	2-3/4 (70)	1/2 (13)	1/2 (13)	38-3/4 (984)	18-3/4 (476)	13-5/8 (346)	18-1/2 (470)	3-1/4 (83)
018	46 (1168)	23 (584)	18 (457)	23 (584)	18 (457)	8-1/4 x 9-3/4 (210) x (248)	13-1/2 (343)	4-3/4 (121)	3-1/4 (83)	3/4 (19)	3/4 (19)	44-3/4 (1137)	21-3/4 (552)	16-5/8 (422)	18-1/2 (470)	4-1/4 (108)
024, 030	46 (1168)	23 (584)	18 (457)	23 (584)	18 (457)	8-1/4 x 11-3/8 (210) x (289)	13-1/2 (343)	4-3/4 (121)	3-1/4 (83)	3/4 (19)	3/4 (19)	44-3/4 (1137)	21-3/4 (552)	16-5/8 (422)	18-1/2 (597)	4-1/4 (108)
036, 042	50 (1270)	25 (635)	19 (483)	25 (635)	20 (508)	10-1/2 x 13-1/2 (267) x (343)	17 (432)	4 (102)	1 (25)	3/4 (19)	3/4 (19)	48-3/4 (1238)	23-3/4 (603)	17-5/8 (448)	23-1/2 (597)	3-1/4 (83)
Std-048	58 (1473)	33 (838)	21 (533)	29-1/2 (597)	23-1/2 (749)	13-1/8 x 11-3/8 (333) x (289)	18 (457)	9-3/4 (248)	1-1/2 (38)	1 (25)	1 (25)	56-3/4 (1441)	31-3/4 (806)	19-5/8 (498)	23-1/2 (597)	5-1/2 (140)
Hi-048, 060	58 (1473)	33 (838)	21 (533)	29-1/2 (597)	23-1/2 (749)	13-7/8 x 13-7/8 (352) x (352)	18 (457)	9-3/4 (248)	1-1/2 (38)	1 (25)	1 (25)	56-3/4 (1441)	31-3/4 (806)	19-5/8 (498)	23-1/2 (597)	5-1/2 (140)

Notes:
1. All dimensions are in inches followed by millimeters in parenthesis.
2. Access to the unit for service purposes should be provided at installation. All configurations require an 18 in. surround clearance from other mechanical and electrical equipment to enable panel removal from the unit for service/maintenance ability. Local and/or NEC codes require greater service clearance. Check all code requirements prior to unit installation. Installer is responsible for following all local and NEC code requirements.
3. Forklift is recommended when rigging the unit. If hot gas reheat is specified for a size 018 or 024, the actual cabinet size increases to an 036 cabinet.

(a) Return air opening dimension
(b) Filter rack dimension

Figure 16. Right return/right supply

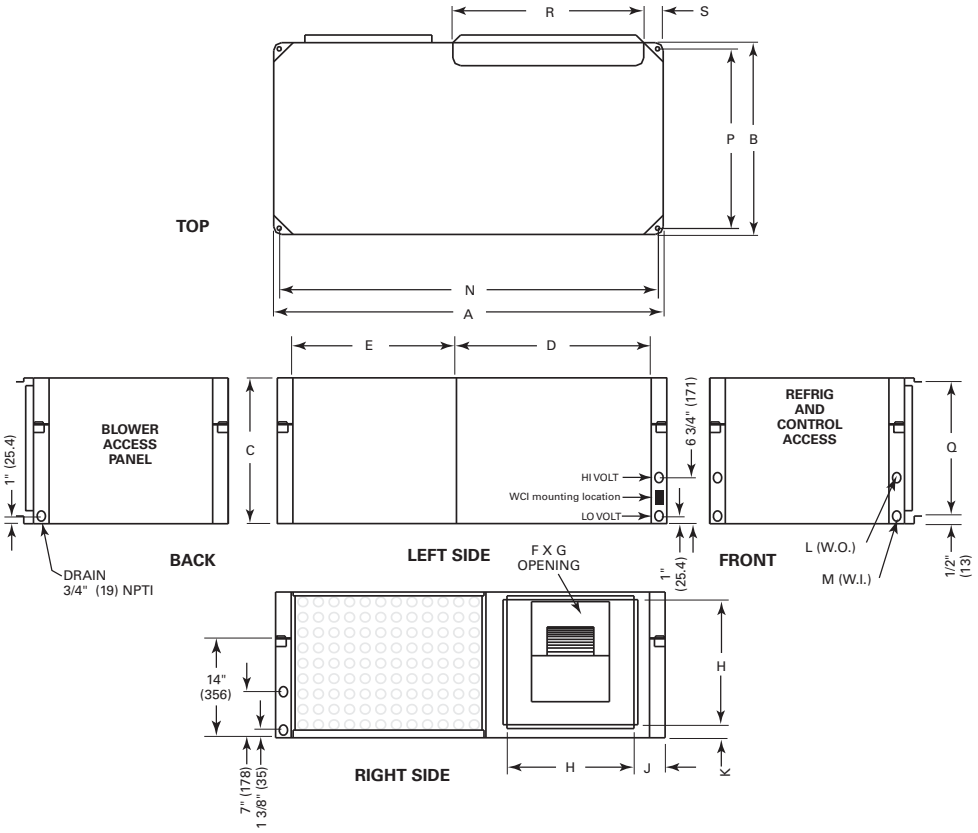


Table 111. Dimensional data—right return/right supply

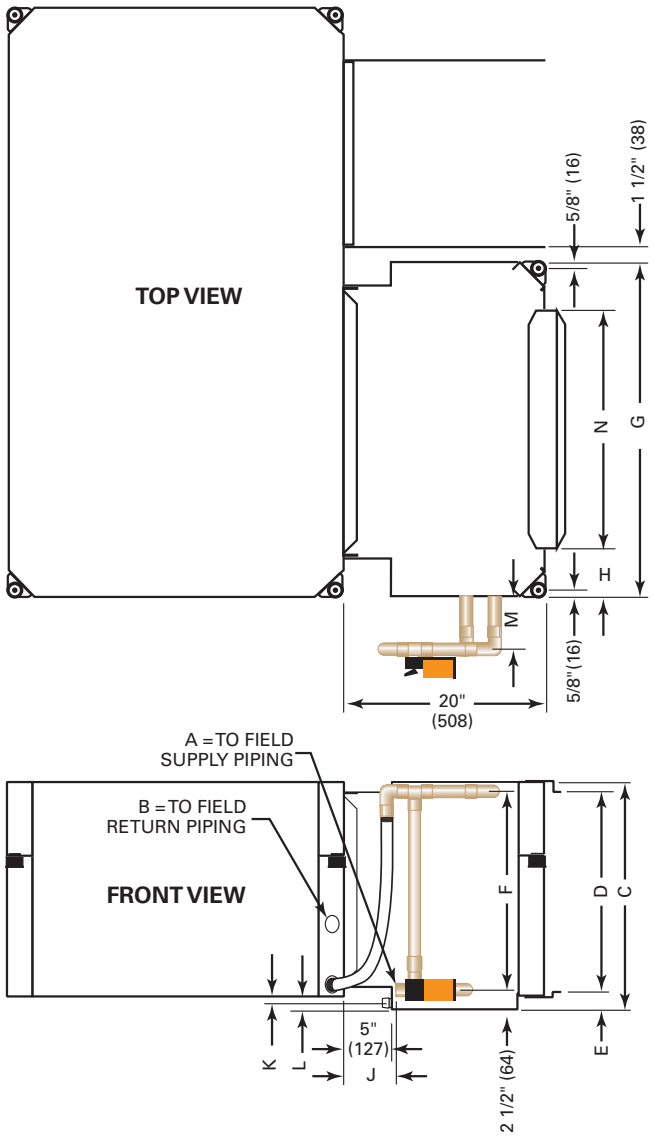
Unit	A	B	C	D[a]	E	F x G	H	J	K	LNPTI	MNPTI	N	P	Q	R[b]	S
006, 009	40 (1016)	20 (508)	15 (381)	20 (508)	15 (381)	6-7/8 x 8 (175) x (203)	11-1/2 (292)	4-1/2 (114)	1-3/4 (45)	1/2 (13)	1/2 (13)	38-3/4 (984)	18-3/4 (476)	13-5/8 (346)	18-1/2 (470)	3-1/4 (83)
012, 015	40 (1016)	20 (508)	15 (381)	20 (508)	15 (381)	6-7/8 x 9-7/8 (175) x (251)	11-1/2 (292)	4-1/4 (108)	2-3/4 (70)	1/2 (13)	1/2 (13)	38-3/4 (984)	18-3/4 (476)	13-5/8 (346)	18-1/2 (470)	3-1/4 (83)
018	46 (1168)	23 (584)	18 (457)	23 (584)	18 (457)	8-1/4 x 9-3/4 (210) x (248)	13-1/2 (343)	4-3/4 (121)	3-1/4 (83)	3/4 (19)	3/4 (19)	44-3/4 (1137)	21-3/4 (552)	16-5/8 (422)	18-1/2 (470)	4-1/4 (108)
024, 030	46 (1168)	23 (584)	18 (457)	23 (584)	18 (457)	8-1/4 x 11-3/8 (210) x (289)	13-1/2 (343)	4-3/4 (121)	3-1/4 (83)	3/4 (19)	3/4 (19)	44-3/4 (1137)	21-3/4 (552)	16-5/8 (422)	18-1/2 (597)	4-1/4 (108)
036, 042	50 (1270)	25 (635)	19 (483)	25 (635)	20 (508)	10-1/2 x 13-1/2 (267) x (343)	17 (432)	4 (102)	1 (25)	3/4 (19)	3/4 (19)	48-3/4 (1238)	23-3/4 (603)	17-5/8 (448)	23-1/2 (597)	3-1/4 (83)
Std-048	58 (1473)	33 (838)	21 (533)	29-1/2 (597)	23-1/2 (749)	13-1/8 x 11-3/8 (333) x (289)	18 (457)	5-1/4 (133)	1-1/2 (38)	1 (25)	1 (25)	56-3/4 (1441)	31-3/4 (806)	19-5/8 (498)	23-1/2 (597)	5-1/2 (140)
Hi-048, 060	58 (1473)	33 (838)	21 (533)	29-1/2 (597)	23-1/2 (749)	13-7/8 x 13-7/8 (352) x (352)	18 (457)	5-1/4 (133)	1-1/2 (38)	1 (25)	1 (25)	56-3/4 (1441)	31-3/4 (806)	19-5/8 (498)	23-1/2 (597)	5-1/2 (140)

Notes:

1. All dimensions are in inches followed by millimeters in parenthesis.
2. Access to the unit for service purposes should be provided at installation. All configurations require an 18 in. surround clearance from other mechanical and electrical equipment to enable panel removal from the unit for service/maintenance ability. Local and/or NEC codes require greater service clearance. Check all code requirements prior to unit installation. Installer is responsible for following all local and NEC code requirements.
3. Forklift is recommended when rigging the unit. If hot gas reheat is specified for a size 018 or 024, the actual cabinet size increases to an 036 cabinet.
4. When a horizontal model is ordered with same side return and supply in a ducted application, bottom filter removal is required due to limited access on either side of the filter.

(a) Return air opening dimension
(b) Filter rack dimension

Figure 17. Waterside economizer[a]



(a) Waterside economizer requires field piping.

Table 112. Dimensional data—waterside economizer

Unit	A NPTI	B NPTI	C	D	E	F	G	H	J	K	L	M	N	Filter Size (nominal)
006-015	1/2 (12.7)	1/2 (12.7)	16-1/8 (410)	13-5/8 (346)	1-1/2 (38)	10-3/4 (273)	23 (584)	2-1/4 (57)	7-1/2 (191)	1/2 (12.7)	1 (25.4)	4 (102)	18-1/2 (470)	14-3/4 x 23-3/4 (375) x (518)
018-030	¾ (19)	¾ (19)	18-1/2 (470)	15-5/8 (397)	1-1/2 (38)	13-3/4 (349)	26 (660)	3-1/4 (83)	6-7/8 (175)	1/2 (12.7)	1 (25.4)	4 (102)	18-1/2 (470)	16-3/4 x 23-3/4 (426) x (603)
036-042	3/4 (19)	3/4 (19)	21 (533)	17-5/8 (448)	2-1/4 (57)	16-1/2 (419)	30 (762)	3-3/4 (95)	6-1/4 (159)	1-1/4 (32)	2 (50.8)	4-1/2 (114)	23-1/2 (597)	18-3/4 x 25-1/2 (476) x (648)
048, 060	1 (25.4)	1 (25.4)	23-1/8 (587)	19-5/8 (498)	2-1/2 (64)	19-1/2 (495)	34 (864)	5-1/4 (133)	5-7/8 (149)	1-1/4 (32)	2 (50.8)	4-1/2 (114)	23-1/2 (597)	20-3/4 x 29-7/8 (528) x (759)

Note: All dimensions are in inches followed by millimeters in parenthesis.

Figure 18. Left return/top supply

Note: *Access to the unit for service purposes should be provided at installation. All configurations require a 36 in. surround clearance from other mechanical and electrical equipment to enable panel removal from the unit for service/maintenance ability. Local and/or NEC codes require greater service clearance. Check all code requirements prior to unit installation. Installer is responsible for following all local and NEC code requirements.*

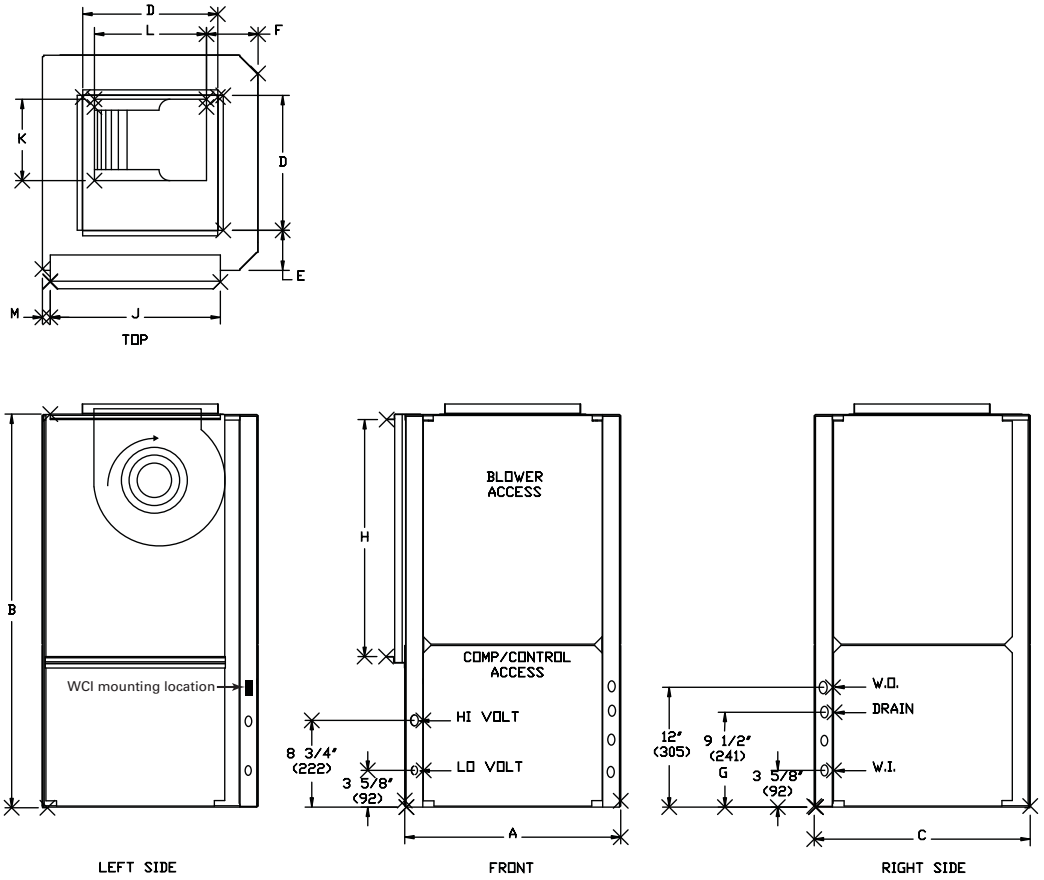


Table 113. Dimensional data—left return/top supply

Unit	A	B	C	D	E	F	G	H	J	K	L	M	W.I. NPTI	W.O. NPTI	Drain FPT
006-015	19-1/2 (495)	31-1/4 (794)	21-1/2 (546)	11-1/2 (292)	4 (102)	5-3/4 (146)	9-1/2 (241)	15 (381)	17 (432)	6-7/8 (175)	8 (203)	3/4 (19)	1/2 (12.7)	1/2 (12.7)	3/4 (19)
018, 024, 030	21-1/2 (546)	39-1/4 (997)	21-1/2 (546)	13-1/2 (343)	4 (102)	4 (1021)	9-1/2 (241)	23-3/4 (603)	17 (432)	8-1/4 (368)	9-3/4 (248) 11-3/8 (289)	3/4 (19)	3/4 (19)	3/4 (19)	3/4 (19)
036, 042	24-1/2 (622)	41-7/8 (1064)	26-1/2 (673)	18 (457)	3-1/4 (83)	5-3/4 (146)	9-1/2 (241)	19 (483)	23 (584)	10-1/2 (267)	13-1/2 (343)	1/4 (6)	3/4 (19)	3/4 (19)	3/4 (19)
Std-048	26-1/2 (673)	46-7/8 (1191)	30-1/2 (775)	18 (457)	4-1/4 (108)	2 (51)	9-1/2 (241)	29 (737)	27-7/8 (708)	13-7/8 (352)	13-7/8 (352)	1/2 (13)	1 (25.4)	1 (25.4)	3/4 (19)
Hi-048, 060	26-1/2 (673)	46-7/8 (1191)	30-1/2 (775)	18 (457)	4-1/4 (108)	2 (51)	9-1/2 (241)	29 (737)	27-7/8 (708)	13-1/8 (333)	11-3/8 (289)	1/2 (13)	1 (25.4)	1 (25.4)	3/4 (19)

Note: All dimensions are in inches followed by millimeters in parenthesis.

Figure 19. Left return/back supply

Note: *Access to the unit for service purposes should be provided at installation. All configurations require a 36 in. surround clearance from other mechanical and electrical equipment to enable panel removal from the unit for service/maintenance ability. Local and/or NEC codes require greater service clearance. Check all code requirements prior to unit installation. Installer is responsible for following all local and NEC code requirements.*

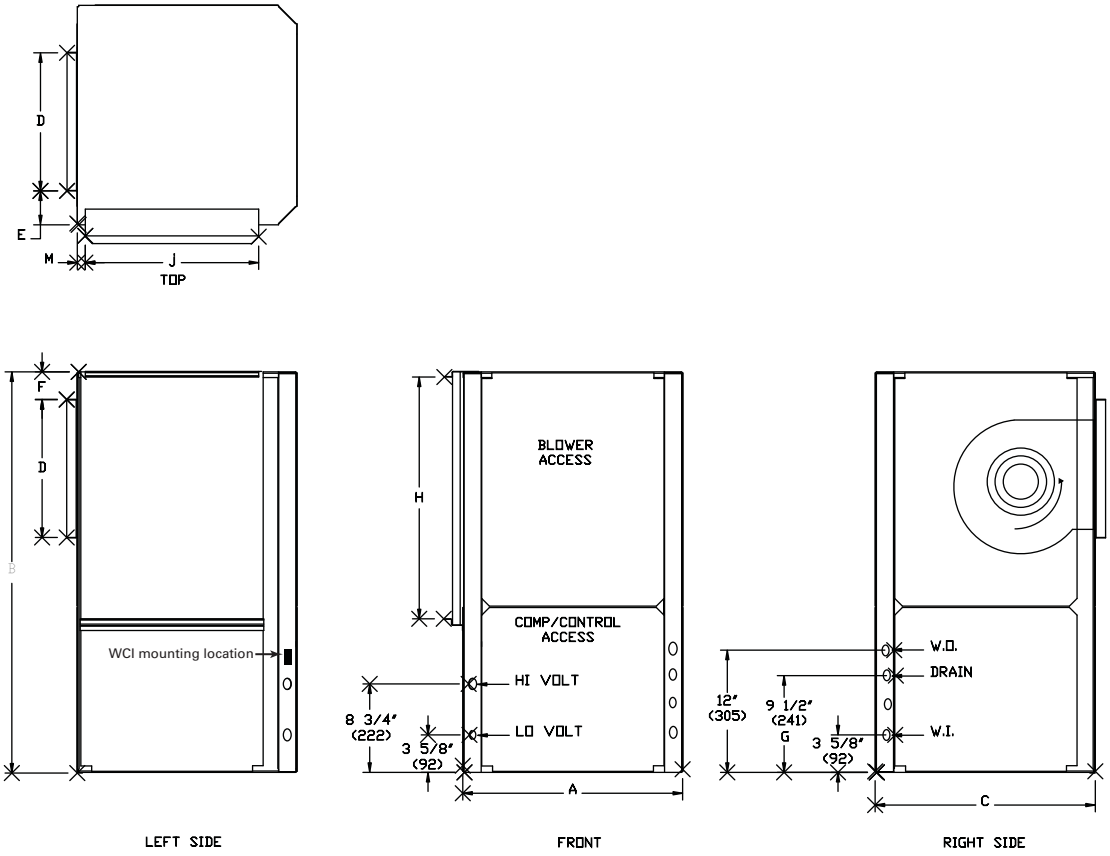


Table 114. Dimensional data—left return/back supply

Unit	A	B	C	D	E	F	G	H	J	K	L	M	W.I. NPTI	W.O. NPTI	Drain FPT
006-015	19-1/2 (495)	31-1/4 (794)	21-1/2 (546)	11-1/2 (292)	4 (102) 006-009 4-3/4 (121) 012-015	1-3/4 (44) 006-009 3-3/4 (95) 012-015	9-1/2 (241)	15 (381)	17 (432)	6-7/8 (175)	8 (203)	3/4 (19)	1/2 (13)	1/2 (13)	3/4 (19)
018, 024, 030	21-1/2 (546)	39-1/4 (997)	21-1/2 (546)	13-1/2 (343)	4 (102)	3-7/8 (98)	9-1/2 (241)	23-3/4 (603)	17 (432)	8-1/4 (368)	9-3/4 (248) 11 3/8 (289)	3/4 (19)	3/4 (19)	3/4 (19)	3/4 (19)
036, 042	24-1/2 (622)	41-7/8 (1064)	26-1/2 (673)	18 (457)	3-1/4 (83)	1-7/8 (48)	9-1/2 (241)	19 (483)	23 (584)	10-1/2 (267)	13-1/2 (343)	1/4 (6)	3/4 (19)	3/4 (19)	3/4 (19)
Std-048	26-1/2 (673)	46-7/8 (1191)	30-1/2 (775)	18 (457)	4-1/4 (108)	2 (51)	9-1/2 (241)	29 (737)	27-7/8 (708)	13-7/8 (352)	13-7/8 (352)	1/2 (13)	1 (25.4)	1 (25.4)	3/4 (19)
Hi-048, 060	26-1/2 (673)	46-7/8 (1191)	30-1/2 (775)	18 (457)	4-1/4 (108)	2 (51)	9-1/2 (241)	29 (737)	27-7/8 (708)	13-1/8 (333)	11-3/8 (289)	1/2 (13)	1 (25.4)	1 (25.4)	3/4 (19)

Note: All dimensions are in inches followed by millimeters in parenthesis.

Figure 20. Right return/top supply

Note: *Access to the unit for service purposes should be provided at installation. All configurations require a 36 in. surround clearance from other mechanical and electrical equipment to enable panel removal from the unit for service/maintenance ability. Local and/or NEC codes require greater service clearance. Check all code requirements prior to unit installation. Installer is responsible for following all local and NEC code requirements.*

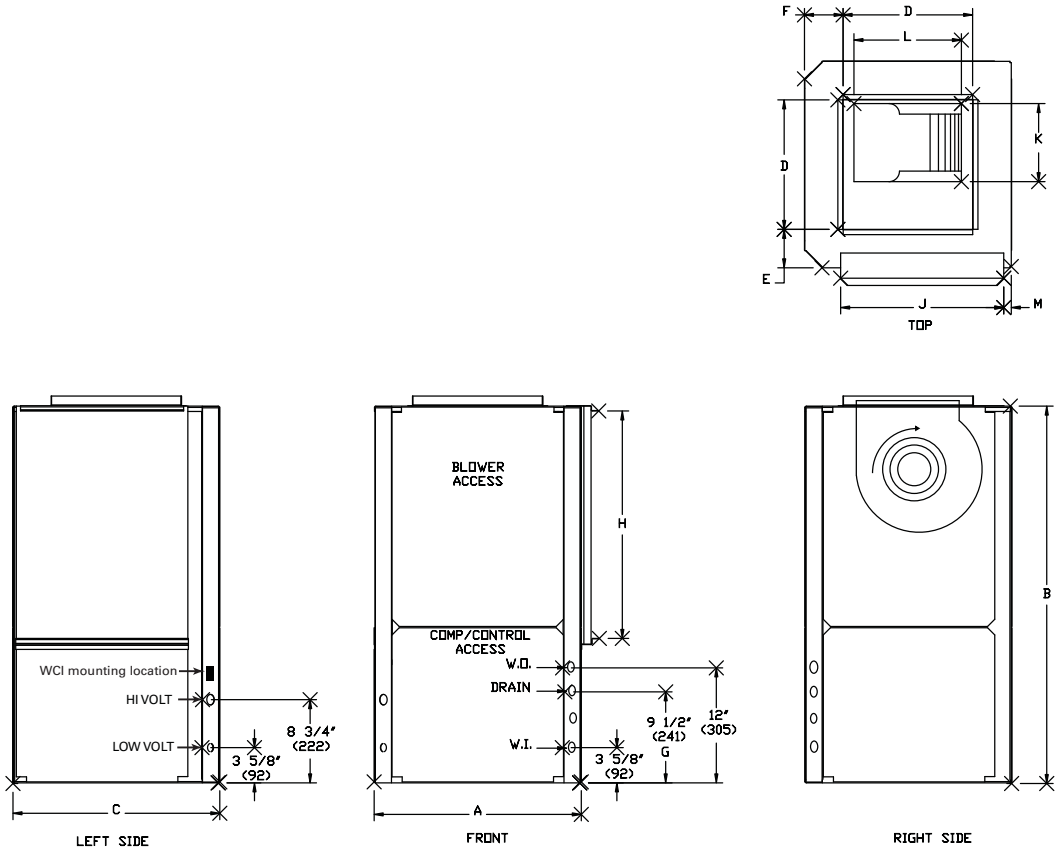


Table 115. Dimensional data—right return/top supply

Unit	A	B	C	D	E	F	G	H	J	K	L	M	W.I. NPTI	W.O. NPTI	DrainF PT
006-015	19-1/2 (495)	31-1/4 (794)	21-1/2 (546)	11-1/2 (292)	4 (102)	5-3/4 (146)	9-1/2 (241)	15 (381)	17 (432)	6-7/8 (175)	8 (203)	3/4 (19)	1/2 (13)	1/2 (13)	3/4 (19)
018, 024, 030	21-1/2 (546)	39-1/4 (997)	21-1/2 (546)	13-1/2 (343)	4 (102)	4 (1021)	9-1/2 (241)	23-3/4 (603)	17 (432)	8-1/4 (368)	9-3/4 (248) 11 3/8 (289)	3/4 (19)	3/4 (19)	3/4 (19)	3/4 (19)
036, 042	24-1/2 (622)	41-7/8 (1064)	26-1/2 (673)	18 (457)	3-1/4 (83)	5-3/4 (146)	9-1/2 (241)	19 (483)	23 (584)	10-1/2 (267)	13-1/2 (343)	1-3/4 (19)	3/4 (19)	3/4 (19)	3/4 (19)
Std-048	26-1/2 (673)	46-7/8 (1191)	30-1/2 (775)	18 (457)	4-1/4 (108)	2 (51)	9-1/2 (241)	29 (737)	27-7/8 (708)	13-7/8 (352)	13-7/8 (352)	1/2 (13)	1 (25)	1 (25)	3/4 (19)
Hi-048, 060	26-1/2 (673)	46-7/8 (1191)	30-1/2 (775)	18 (457)	4-1/4 (108)	2 (51)	9-1/2 (241)	29 (737)	27-7/8 (708)	13-1/8 (333)	11-3/8 (289)	1/2 (13)	1 (25)	1 (25)	3/4 (19)

Note: All dimensions are in inches followed by millimeters in parenthesis.

Figure 21. Right return/back supply

Note: *Access to the unit for service purposes should be provided at installation. All configurations require a 36 in. surround clearance from other mechanical and electrical equipment to enable panel removal from the unit for service/maintenance ability. Local and/or NEC codes require greater service clearance. Check all code requirements prior to unit installation. Installer is responsible for following all local and NEC code requirements.*

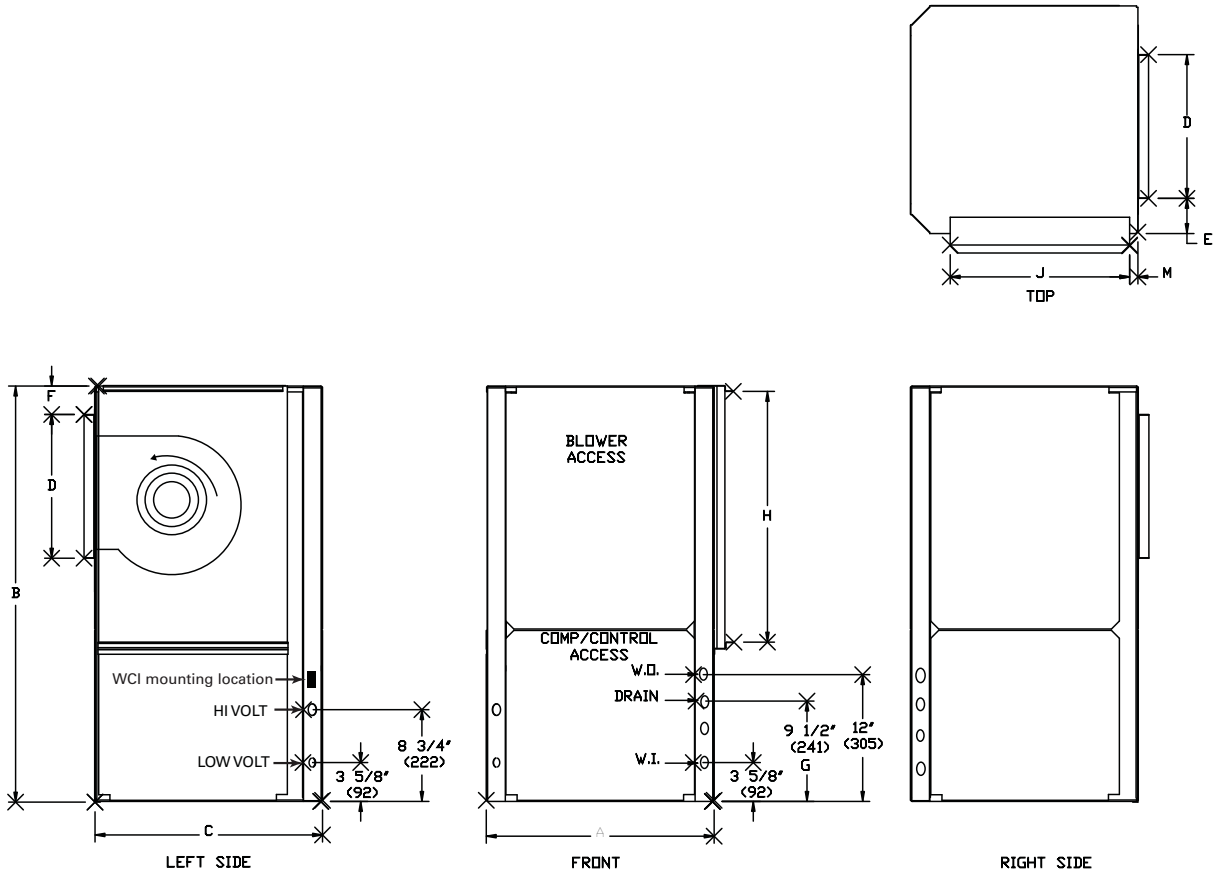


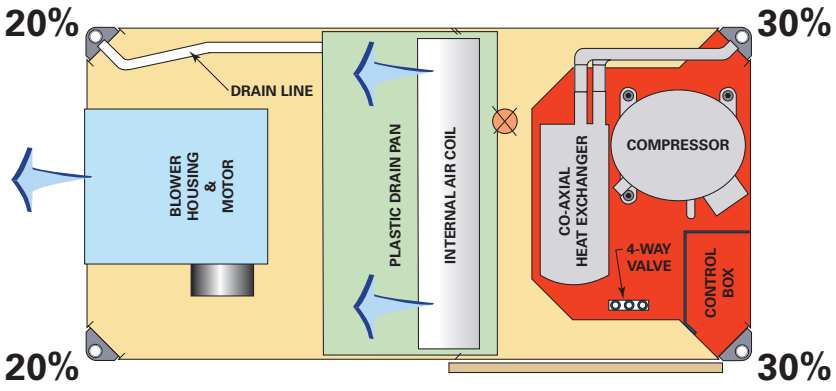
Table 116. Dimensional data—right return/back supply

Unit	A	B	C	D	E	F	G	H	J	K	L	M	W.I. NPTI	W.O. NPTI	Drain FPT
006-015	19-1/2 (495)	31-1/4 (794)	21-1/2 (546)	11-1/2 (292)	4 (102) 006-009 6 (152) 012-015	1-3/4 (44) 006-009 1¼ (32) 012-015	9-1/2 (241)	15 (381)	17 (432)	6-7/8 (175)	8 (203)	3/4 (19)	1/2 (13)	1/2 (13)	3/4 (19)
018, 024, 030	21-1/2 (546)	39-1/4 (997)	21-1/2 (546)	13-1/2 (343)	4 (102)	3-7/8 (98)	9-1/2 (241)	23-3/4 (603)	17 (432)	8-1/4 (368)	9-3/4 (248) 11-3/8 (289)	3/4 (19)	3/4 (19)	3/4 (19)	3/4 (19)
036, 042	24-1/2 (622)	41-7/8 (1064)	26-1/2 (673)	18 (457)	3-1/4 (83)	1-7/8 (48)	9-1/2 (241)	19 (483)	23 (584)	10-1/2 (267)	13-1/2 (343)	1-3/4 (19)	3/4 (19)	3/4 (19)	3/4 (19)
Std-048	26-1/2 (673)	46-7/8 (1191)	30-1/2 (775)	18 (457)	4-1/4 (108)	2 (51)	9-1/2 (241)	29 (737)	27-7/8 (708)	13-7/8 (352)	13-7/8 (352)	1/2 (13)	1 (25.4)	1 (25.4)	3/4 (19)
Hi-048, 060	26-1/2 (673)	46-7/8 (1191)	30-1/2 (775)	18 (457)	4-1/4 (108)	2 (51)	9-1/2 (241)	29 (737)	27-7/8 (708)	13-1/8 (333)	11-3/8 (289)	1/2 (13)	1 (25.4)	1 (25.4)	3/4 (19)

Note: All dimensions are in inches followed by millimeters in parenthesis.

Weights

Figure 22. Approximate weight distribution



Weight Distribution

Approximate weight distribution for the GEH model is indicated in Figure 22, p. 123.

Tolerance on the weights determined are ±15%.

Total weights for each unit are listed below.

GEH unit	Shipping weight (lbs)	Running weight (lbs)
006-009	195	165
012-015	203	173
018	268	248
024, 030	285	253
036-042	318	288
048, 060	428	398

Controls

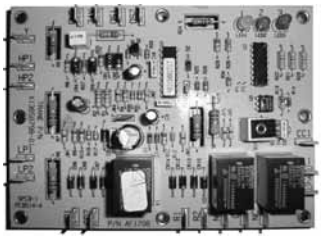
Basic 24V Controls

The basic 24 V electro-mechanical unit control provides component protection devices for maximum system reliability. Each device is factory mounted, wired and tested. Features include 50 VA transformer, compressor contactor, time delay relay, general alarm, low pressure switch, high pressure switch, condensate overflow, freeze protection, lockout relay, reversing valve coil (for heating and cooling units), multi-speed fan motor, 18-pole terminal strip (for low-voltage field wiring).

Deluxe 24V Electronic Controls

The 24 V deluxe design is a microprocessor-based control board conveniently located in the control box. The board is unique to Trane water-source products and is designed to control the unit as well as provide outputs for unit status and fault detection.

The board is factory wired to a terminal strip to provide all necessary terminals for field connections.



The deluxe 24V electronic unit control contains upgraded features to maximize system performance to extend the system life. Each device, is factory mounted, wired, and tested in the unit. Features include 50 VA transformer on the standard heat pump and cooing units only. Hot gas reheat and electric heat units with deluxe controls offer a 75 VA transformer. Other features include compressor contactor, compressor lockout function, anti-short cycle compressor protection, random start delay, brown-out protection, low pressure time delay, low pressure switch, condensate overflow, freeze protection, high pressure switch, compressor delay on start, reversing valve coil (for heating and cooling units), multi-speed fan motor, soft lockout mode, 18-pole terminal strip (for low voltage field wiring), optional: hot gas reheat (for dehumidification), optional: electric heat.

Deluxe 24V features include:

Anti-short Cycle Timer

The anti-short cycle timer provides a three minute time delay between compressor stop and compressor restart.

Brown-out Protection

The brown-out protection function measures the input voltage to the controller and halts the compressor operation. Once a brown-out situation has occurred, the anti-short cycle timer will become energized. The general fault contact will not be affected by this condition. The voltage will continue to be monitored until the voltage increases. The compressors will be enabled at this time if all start-up time delays have expired, and all safeties have been satisfied.

Compressor Disable

The compressor disable relay provides a temporary disable in compressor operation. The signal would be provided from a water loop controller in the system. It would disable the compressor because of low water flow, peak limiting or if the unit goes into an unoccupied state. Once the compressor has been disabled, the anti-short cycle time period will begin. Once the compressor

disable signal is no longer present, and all safeties are satisfied, the control will allow the compressor to restart.

Diagnostics

Three LEDs (light emitting diodes) are provided for indicating the operating mode of the controller. See the unit IOM for diagnostics or troubleshooting through the use of the LEDs.

Generic Relay

The generic relay is provided for field use in some applications.

A 24 Vac signal will energize the relay coil on terminals R1 and R2. Terminals C (common), NO (normally open), and NC (normally closed) will be provided for the relay contacts.

Random Start

The random start relay provides a time delay start-up of the compressor when cycling in the occupied mode. A new start delay time between 3 and 10 seconds is applied each time power is enabled to the unit.

Safety Control

The deluxe controller receives separate input signals from the refrigerant high pressure switch, low suction pressure switch, freezestat and condensate overflow.

In a high pressure situation, the compressor contactor is de-energized, which suspends compressor operation. The control will go into soft lockout mode initializing a three minute time delay and a random start of 3 to 10 second time delays. Once these delays have expired, the unit will be allowed to run. If a high pressure situation occurs within one hour of the first situation, the control will be placed into a manual lockout mode, halting compressor operation, and initiating the general alarm.

In a low temperature situation, the low pressure switch will transition open after the compressor starts. If the switch is open for 45 seconds during compressor start, the unit will go into soft lockout mode initializing a three minute time delay and a random start of 3 to 10 second time delays. Once these delays have expired, the unit will be allowed to run. If the low pressure situation occurs again within 30 minutes, and the device is open for more than 45 seconds, the control will be placed into a manual lockout mode, halting compressor operation, and initiating the general alarm.

In a condensate overflow situation, the control will go into manual lockout mode, halting compressor operation, and initiating the general alarm.

The general alarm is initiated when the control goes into a manual lockout mode for either high pressure, low pressure, freezestat or condensate overflow conditions.

Safety Devices

System safety devices are provided through the use of low/high pressure switches in the refrigeration circuit to help prevent compressor damage.

The low pressure switch is set to activate at refrigerant pressures of 40 psig to fit most applications.

In cases where a low charge, or excessive loss of charge occurs, each compressor comes equipped with an external overload device to halt the compressor operation.

The high pressure switch prevents compressor operation during high or excessive discharge pressures that exceed 650 psig.

A lockout relay provides the mechanical communication of the low and high pressure switches to prevent compressor operation if the unit is under low or high refrigerant circuit pressure, or during a condensate overflow condition. The lockout relay may be reset at the thermostat, or by cycling power to the unit.

General alarm is accomplished through the lockout relay and will drive dry contacts only, and cannot be used to drive field installed control inputs.

Stand-alone System

The 24 V basic or deluxe design may be applied as a stand-alone control system. The stand-alone design provides accurate temperature control directly through a wall-mounted electronic thermostat. This system set-up may be utilized in a replacement design where a single unit retrofit is needed. It may be easily interfaced with a field provided control system by way of the factory installed 18-pole terminal strip. This stand-alone control is frequently utilized on small jobs where a building controller may not be necessary, or where field installed direct digital controls are specified. This type of control design does require a constant flow of water to the water source heat pump. With a positive way to sense flow to the unit, the units safety devices will trigger the unit off. The stand-alone system design provides a low cost option of installation while still allowing room control for each unit.

Tracer Direct Digital Controllers DDC Controls

The Tracer ZN524 and UC400 are DDC that when applied to water-source equipment provide control of the entire unit, as well as outputs for unit status and fault detection. Each device is factory installed, commissioned, and tested to ensure the highest level of quality in unit design.

Each controller feature and option was selected to coordinate with the unit hardware to provide greater energy efficiency and equipment safety to prolong the equipment life.

Trane WSHP with DDC controllers features include 75VA transformer, compressor contactor, compressor lockout function, random start delay, heating/cooling status, occupied/unoccupied mode, low pressure switch, high pressure switch, fan and filter status optional, reversing valve coil (for heating and cooling units), multi-speed fan motor, 18-pole terminal strip (for low voltage field wiring), condensate overflow and freeze protection. Additional features include water isolation valve support (for variable speed pumping). Optional features include boilerless control for electric heat, waterside economizer, hot gas reheat (for dehumidification).

Tracer™ ZN524

The Tracer ZN524 is LonTalk certified. It is capable of working with, and talking to other LonTalk certified controllers providing the building owner more choices, and the design engineers more flexibility to meet the challenges of building automation.

Tracer™ UC400

The Tracer™ UC400 is a BTL Listed BACnet controller that can operate stand-alone or within a Building Automation system such as Tracer™ SC.

Tracer UC400/ZN524 functions include:

Boilerless Control Electric Heat

The controller supports a single stage of boilerless electric heat operation.

Electric heat is used when boilerless heat is enabled/configured and the EWT is too low for compressor operation. When this condition is met, the isolation valve will be closed shutting down the water flow to the unit.

Compressor Operation

The compressor is cycled on and off to meet heating or cooling zone demands. Units use the unit capacity and pulse width modulation (PWM) logic along with minimum on/off timers to determine the compressor's operation. The compressor is controlled ON for longer periods as capacity increases and shorter periods as capacity decreases.

Condensate Overflow

When condensate reaches the trip point, a condensate overflow signal generates a diagnostic which disables the fan, unit water valves (if present), and compressor. The unit will remain in a halted state until the condensation returns to a normal level. At this time, the switch in the drain pan will automatically reset. However, the controller's condensate overflow diagnostic must be manually reset to clear the diagnostic and restart the unit.

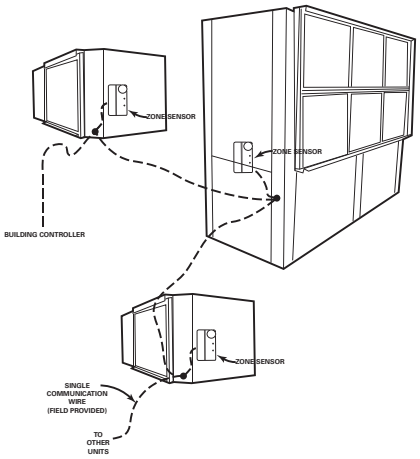
Building Control Advantages

The Tracer™ ZN524 or UC400 controllers have the ability to share information with one or several units on the same communication link.

An advantage of installing aTracer™ UC400 or ZN524 is its capability to work with other BACnet or LonTalk™ controllers. This provides greater flexibility to the building owner, as well as greater flexibility in design.

Integrating the UC400 or ZN524 on water-source equipment, and tying it to aTracer™ SC or other BAS system provides a complete building management system. With a Building Automation system like a Tracer™ SC, the system can initiate an alarm on a loss of performance on equipment malfunctions; allowing problems to be handled in a timely manner before compromising comfort.

This type of application would most commonly be used for a large space(s) that may require more than one unit. In addition to this application design, UC400 and ZN524 controller provides a way for units located within the same space to share the same zone sensor to prevent units from simultaneously heating and cooling in the same space.



Data Sharing

The UC400 and ZN5234 are capable of sending or receiving data (setpoints, fan request, or space temperature) to and from other controllers on the communication link. This allows multiple units to share a common space temperature sensor in both stand-alone and building automation applications.

Dehumidification

Dehumidification for the water-source heat pump is applicable with the UC400 and ZN524. The controller is capable of directing one stage of DX cooling in conjunction with one stage of reheat (hot gas reheat).

Dehumidification can only occur when the controller is in the cooling mode. A humidity sensor is used to measure the zone's relative humidity (RH), then compares the zone relative humidity to the relative humidity enable/disable setpoint parameters. The dehumidification enable and disable points are configurable.

Fan Operation

The supply air fan operates at the factory wired speed in the occupied or occupied standby mode. When switch is set to AUTO, the fan is configured for cycling ON with heating or cooling. In heat mode, the fan will run for 30 seconds beyond compressor shutdown in both occupied and unoccupied mode.

Filter Maintenance Timer

The controller filter status is based on the unit fan's cumulative run hours. The controller compares the fan run time against an adjustable fan run hours limit and recommends unit maintenance as required.

High and Low Pressure Switches

The UC400 and ZN524 detects the state of the high pressure or low pressure switches. When a fault is sensed by one of these switches, the corresponding message is sent to the controller to be logged into the fault log. When the circuit returns to normal, the high pressure control and low pressure control automatically reset. If a second fault is detected within a thirty-minute time span, the unit must be manually reset.

Occupancy Modes

The four operations of the UC400 and ZN524 controller include occupied, occupied standby, occupied bypass and unoccupied.

In an occupied situation, the controller uses occupied heating and cooling setpoints to provide heating and cooling to the building. This occupied operation is normally used during the daytime hours when the building is at the highest occupancy level.

In an occupied standby situation, the controllers heating and cooling setpoints are usually wider than the occupied setpoints. This occupied standby operation is used during daytime hours when people are not present in the space (such as lunchtime or recess). To determine the space occupancy, an occupancy sensor is applied.

In an unoccupied situation, the controller assumes the building is vacant, which normally falls in evening hours when a space may be empty. In the unoccupied mode, the controller uses the default unoccupied heating and cooling setpoints stored in the controller. When the building is in unoccupied mode, individual units may be manually placed into timed override of the unoccupied mode at the units wall sensor. During timed override, the controller interprets the request and initiates the occupied setpoint operation, then reports the effective occupancy mode as occupied bypass.

In the occupied bypass mode, the controller applies the occupied heating and cooling setpoint for a 120-minute time limit.

Random Start

To prevent all of the units in a building from energizing major loads at the same time, the controller observes a random start from 0 to 25 seconds. This timer halts the controller until the random start time expires.

Reversing Valve Operation

For cooling, the reversing valve output is energized simultaneously with the compressor. It will remain energized until the controller turns on the compressor for heating. At this time, the reversing valve moves to a de-energized state. In the event of a power failure or controller OFF situation, the reversing valve output will default to the heating (de-energized) state.

Entering Water Temperature Sampling

The controller will sample the entering water temperature to determine proper control action for units equipped with boilerless electric heat or waterside economizer.

Waterside Economizer

Entering water temperature (EWT) sampling will automatically occur at power up when the unit is equipped with a waterside economizer (WSE). The EWT is used to determine if economizing is feasible. When the conditions are met, the isolation valve(s) are driven open for three minutes and the EWT reading is taken. The determination as to whether or not the economizer can be enabled will be made and the controller will take appropriate action. The isolation valve will remain open regardless if the WSE or the DX cooling is enabled.

The unit's waterside economizer will contain a 2-position water valve wired to the controller. The economizing water coil will be optimized to provide 100% of the unit capacity at 80.6°F/66.2°F return air temperature with 45°F entering water. The flow rate is established at 86 F entering water temperature and 96°F leaving water temperature.

Low leaving air protection will be furnished to protect the unit against delivering air that is cold enough to sweat discharge air grilles. Coil icing protection will also be provided.

Waterside economizer cooling will be active during occupied, unoccupied and standby cooling modes.

Water Isolation Valve

Variable speed pumping systems are supported by the UC400 and ZN524 controller when water isolation valves (12 VA max) are present.

Isolation Valve "ON" Control. The isolation valve output will be energized (controlled open) during compressor heating, compressor cooling, waterside economizing or dehumidification.

When the isolation valve is driven open for compressor operation, the output will be energized 20 seconds prior to the compressor and indoor fan (if not already energized) outputs to ensure adequate water flow to the heat exchanger. To reduce excessive cycling of the isolation valve once opened, the isolation valve will remain open for a minimum of 10 minutes.

Isolation Valve "OFF" Control. The isolation valve output will be de-energized (controlled closed) when there is no longer a call for compressor or WSE operation and the 10 minute minimum on time has expired.

Wireless Comm Interface (WCI) . The Trane® wireless Comm Interface (WCI) enables wireless communication between system controls, unit controls, and wireless sensors for the new generation of Trane control products. The WCI replaces the need for communication wire in all system applications.

Note: *See BAS-SVX40*-EN, Installation, Operation and Maintenance, Wireless Comm for more information.*

Quantity of WCIs per Network. Each Trane® wireless network can have a total of 31 WCIs (30 member WCIs plus 1 coordinator WCI). Each network requires one WCI to function as network coordinator.

Quantity of Networks per Tracer™ SC. A Tracer™ SC can support up to 8 wireless networks.

Automatic Network Formation. When a WCI is connected to a Tracer™ SC, it is auto-assigned as the coordinator. To enable the coordinator, Tracer™ SC must be configured for wireless communication. The coordinator WCI opens the network to allow all WCIs having matching addresses to automatically join the network. If no Tracer™ SC is present, a centrally located WCI must be designated to act as the coordinator. You can manually set the coordinator WCI so all WCIs having matching addresses automatically join the network.

Wireless Zone Sensors. The WCI also communicates with Trane® wireless zone sensors, eliminating the need for analog receivers.

Wired Zone Sensors. Systems using Wireless Comm can also use wired zone sensors.

Thermostats and Zone Sensors

Table 117. Thermostat selection for use with the Basic or Deluxe Controllers

Thermostat	Part Number	Description
	X13511535010	1 Heat/1 Cool, Non-Programmable Commercial Thermostat for conventional air conditioners and heat pumps that are configured with or without auxiliary heat • 1 H/1 C
	X13511536010	3 Heat/2 Cool, Non-programmable commercial thermostat for conventional air conditioners and heat pumps that are configured with or without auxiliary heat. • 3 H/2 C
	X13511537010	3 Heat/2 Cool, Programmable commercial thermostat for conventional air conditioners and heat pumps configured with or without auxiliary heat. • 3 H/2 C
	X13511538010	3Heat/2 Cool, Programmable touch screen thermostat for conventional air conditioners and heat pump systems. The thermostat will provide the human interface, zone temperature sensing both local and optional remote temperature sensing, and set point scheduling on a daily/weekly basis. This thermostat can also display humidity with a control signal for dehumidification with a local humidity sensor or optional remote humidity sensor. • 3 H/2 C

Table 118. Wired zone sensor selection for use with ZN524 or UC400 controllers

Sensor	Part Number	Description
	X13790886010	Wired temperature sensor with an LCD display • Allows an occupant to control the temperature setpoint, request timed override of system operation, and provides a COMM module to service technicians. • Tracer™ ZN524 and UC400 Compatible
	X13651467020	Communication Module • Sold in packs of 12 • Provides local RJ22 connection to Trane® service tools for easy, low cost maintenance.
	X1379084501	Zone Sensor • Tracer™ ZN524 and UC400 compatible • External setpoint adjustment wheel • ON and CANCEL buttons • Fan switch AUTO-OFF
	X13511527010	Zone Sensor • Tracer™ ZN524 and UC400 compatible • External setpoint adjustment wheel • ON and CANCEL buttons
	X13511529010	Zone Sensor • Tracer™ ZN524 and UC400 compatible • External setpoint adjustment wheel
	X1379044401	Zone Sensor • Tracer™ ZN524 and UC400 compatible • Temperature and relative humidity sensor

Table 119. Wireless zone sensor selection for use with the UC400 controller

Sensor	Part Number	Description
	X1379082201	Universal Display Sensor • Clear and simple monitoring and control • Tracer™ UC400 Compatible
	X13790492	Wireless Zone Sensor • Local control • Limited occupant temp. control • Timed occupancy overrides
	X13790821	Wireless Zone Sensor • Simplicity • Eliminates local temperature control when higher control level is required
		WCI - UC400 compatible • Provides wireless communication between the Tracer™ SC, Tracer™ Unit Controllers, and BACnet® Communication Interface (BCI) modules

Accessories

Ducted Panel

Figure 23. Return-air duct panel

The return-air arrangement may be easily converted from a free return-air system, to a ducted return-air system with the addition of a return-air side panel. By replacing the filter racks with the return-air panel, a complete seal from the duct to the unit is possible. The 1½ in. duct flange facilitates ease of field connection to the mechanical system. This accessory is typically used when the return-air filter is placed in a built-in ceiling grille, or placed within a field provided filter rack assembly.

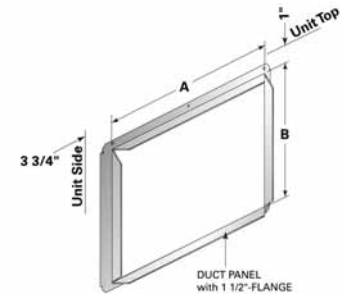


Table 120. Duct panel opening size and part number

Unit Size (60 Hz)	Unit Size (50 Hz)	A	B	Duct Collar Part Number
006-015	006-012	17½ in. (445 mm)	13 in. (330 mm)	4474 1133 0100
018-030	015-024	20½ in. (521 mm)	16 in. (406 mm)	4474 5628 0100
036-042	030-036	22½ in. (572 mm)	17 in. (432 mm)	4474 1135 0100
048-060	042-060	26½ in. (673 mm)	19 in. (483 mm)	4474 1136 0100

Ducted Filter Rack

Figure 24. Ducted filter rack

When it is necessary to have filter access at the unit in a ducted return, a ducted filter rack is available. This option allows access to the filter at the unit. Vertical unit filter racks are available in right or left access configurations. Horizontal units are available in top, bottom or side access configurations.

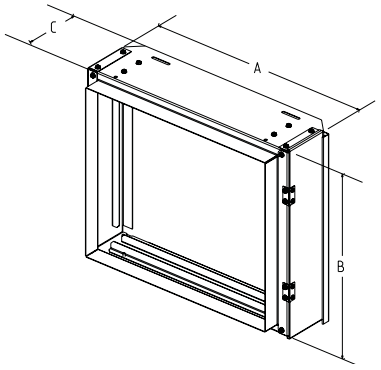


Table 121. Ducted filter opening size

Unit Size	A (in.)	B (in.)	C (in.)
GEH 006-015	21.1	15.4	5.4
GEH 018-030	24.5	18.4	5.6
GEH 036-042	26.4	19.4	5.5
GEH 048-060	30.7	21.4	5.5
GEV 006-015	20.7	17.1	5.5
GEV 018-040	20.7	23.1	5.5
GEV 036-042	25.7	22.4	4.3
GEV 048-060	30.7	26.6	5.5

Note: All dimensions in inches

Dual Filtration Design

Table 122. Dual filter accessory kit numbers

Unit size 1 in. filter	1 in. filter kit part no.	2 in. filter kit part no.
006-015	4474 0630 0100	4474 0634 0100
018-030	4474 5629 0100	4474 5630 0100
036, 042	4474 0632 0100	4474 0636 0100
048, 060	4474 0633 0100	4474 0637 0100

Automatic and Manual Balancing Kits

Superior circuit balancing of the HVAC equipment is an important aspect to the overall layout and design of the HVAC system. Proper balance of the system can protect the WSHP equipment while providing a longer equipment life.

Trane provides three hose kit selections for equipment balancing.

- Ball valve flow control (manual)
- Circuit setter flow control (manual)
- Automatic, Self Balancing Flow Control Hose Kit

Each selection provides some accuracy in equipment balancing. Range of accuracy consist of ±25% for the ball valve method, ±20% for the manual flow control method, and ±10% for the automatic flow control method.

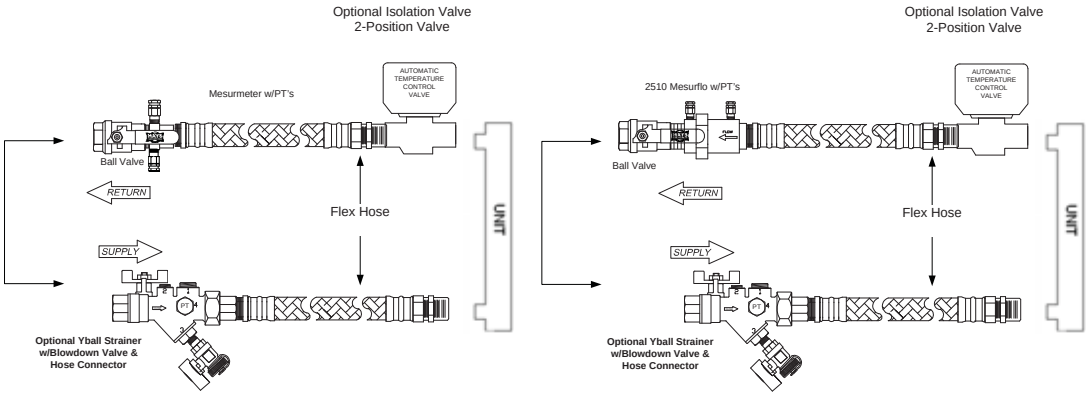
Utilizing the ball valve flow control method, the pressure/temperature measurement on the leaving and entering side of the heat pump is measured within the water piping. The ball valve is then throttled to change the amount of flow to the unit to reach the desired temperature or pressure differential.

The circuit setter manual flow control method uses an in-line flow measurement device an and adjustment feature to measure and set flow rates at each heat pump.

For automatic system balancing of a water source heat pump, the Mesurflo® self-balancing hose kit provides a constant flow rate over the pressure differential rage of 2 to 80 psid. As system pressure changes (through further addition of heat pumps, for example) each individual flow control valve will automatically adjust to the new system conditions. In variable water volume applications, a self-balancing hose kit can provide continuous balancing because of its ability to automatically adjust to the varying system conditions.

Note: *At low differential pressure the flow area required to achieve higher flow can exceed the flow area available for the respective series. Therefore, the minimum pressure differential requirement is increased for the higher flow ranges of each series Mesurflo valve.*

Figure 25. Ball valve kit (manual)/MeasurfloVac kit (automatic)



Motorized water valve

The motorized water valve is installed on the return line of the water loop system between the loop and the loop's pump module. This isolation device is less expensive and a very effective alternative to the water regulating valve.

When the compressor begins running, the valve will open, allowing water to flow through the unit. As the compressor shuts down, the valve slowly closes off. The main purpose of the motorized valve is to shut-off the flow of water through the unit when the unit is off, thus reducing water consumption. The motorized valve is fast opening to prevent compressor trip-out, and slow closing to prevent water hammer.

Pump module

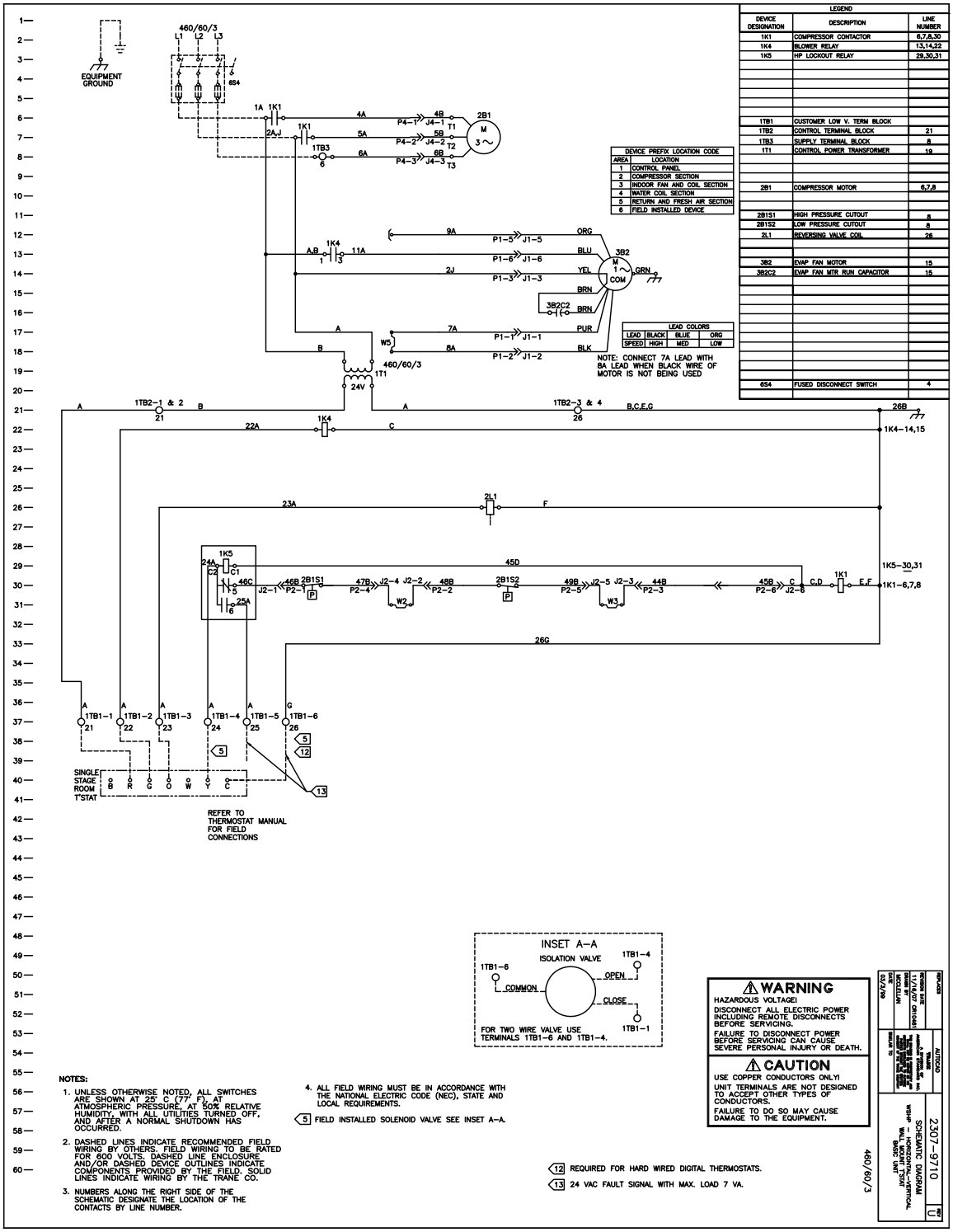
The pump module and hose kit make a complete self-contained pumping package for distributed pumping systems. These kits contain all the necessary components for the installation, operation and maintenance of the water circuit of a closed loop geothermal application. Standard pump module features include insulated Grundfos pumps, insulated cabinet, bronze or cast iron pump, and 3-way brass valves. Literature number WSHPC-IN-5 will provide electrical and dimensional requirements for the PMCA and PMBA products.

Pump module hose kit

The pump module hose kit consists of two brass, ¾ in. or 1 in., male pipe thread (MPT)-by-barb fittings; two brass 90° 1-inch, MPT-by-barb elbows with pressure/temperature ports; and 10 ft of rubber hose with 4 hose clamps. The pump module hose kit is available separately from the pump module.

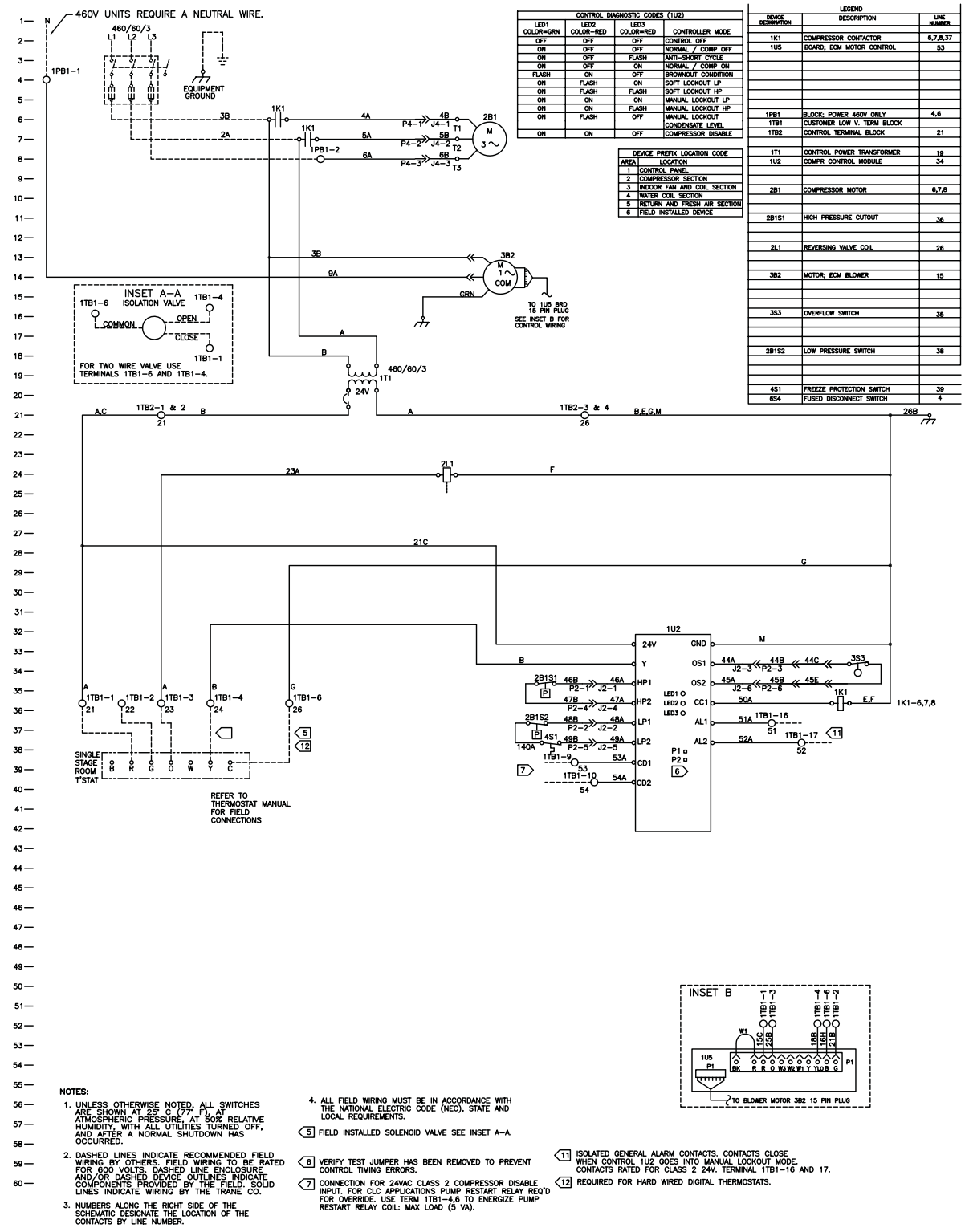
Control Wiring

Figure 26. Basic 24V - 460V-60 Hz - 3 ph[(a)]



(a) Wiring diagrams provided in the catalog are generic. A unit specific *As Built* wiring diagram is located on the unit control panel.

Figure 27. Deluxe 24V - 460V-60 Hz - 3 ph[a]

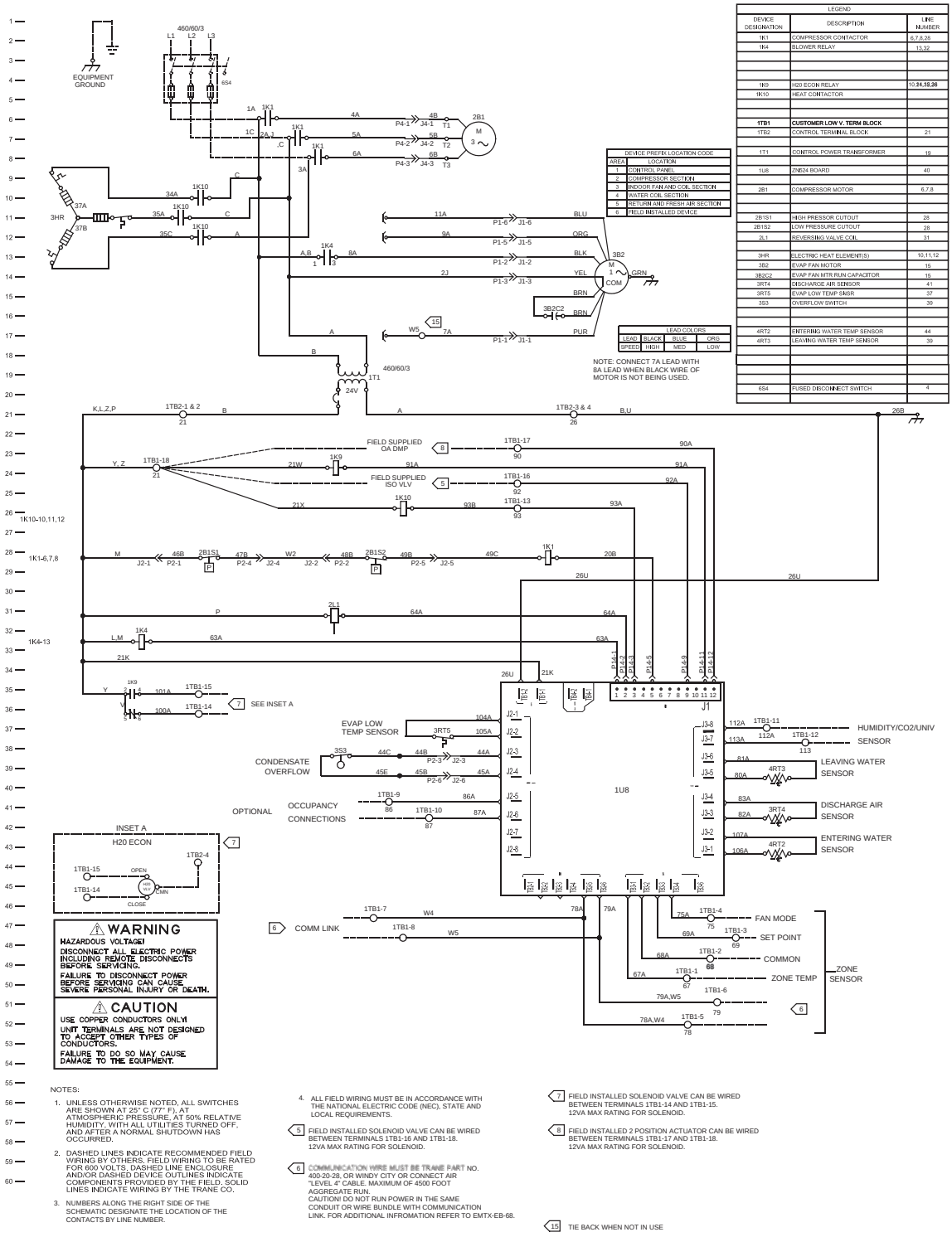


NOTES:

1. UNLESS OTHERWISE NOTED, ALL SWITCHES ARE SHOWN AT 25° C (77° F), AT ATMOSPHERIC PRESSURE, AT 50% RELATIVE HUMIDITY, WITH ALL UTILITIES TURNED OFF, AND AFTER A NORMAL SHUTDOWN HAS OCCURRED.
2. DASHED LINES INDICATE RECOMMENDED FIELD WIRING BY OTHERS. FIELD WIRING TO BE RATED FOR 600 VOLTS. DASHED LINE ENCLOSURE AND/OR DASHED DEVICE OUTLINES INDICATE COMPONENTS PROVIDED BY THE FIELD. SOLID LINES INDICATE WIRING BY THE TRANE CO.
3. NUMBERS ALONG THE RIGHT SIDE OF THE SCHEMATIC DESIGNATE THE LOCATION OF THE CONTACTS BY LINE NUMBER.
4. ALL FIELD WIRING MUST BE IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE (NEC), STATE AND LOCAL REQUIREMENTS.
5. FIELD INSTALLED SOLENOID VALVE SEE INSET A-A.
6. VERIFY TEST JUMPER HAS BEEN REMOVED TO PREVENT CONTROL TIMING ERRORS.
7. CONNECTION FOR 24VAC CLASS 2 COMPRESSOR DISABLE INPUT. FOR CLC APPLICATIONS PUMP RESTART RELAY REQ'D FOR OVERRIDE. USE TERM 1TB1-4,6 TO ENERGIZE PUMP RESTART RELAY COIL: MAX LOAD (5 VA).
11. ISOLATED GENERAL ALARM CONTACTS. CONTACTS CLOSE WHEN CONTROL 1U2 GOES INTO MANUAL LOCKOUT MODE. CONTACTS RATED FOR CLASS 2 24V. TERMINAL 1TB1-16 AND 17.
12. REQUIRED FOR HARD WIRED DIGITAL THERMOSTATS.

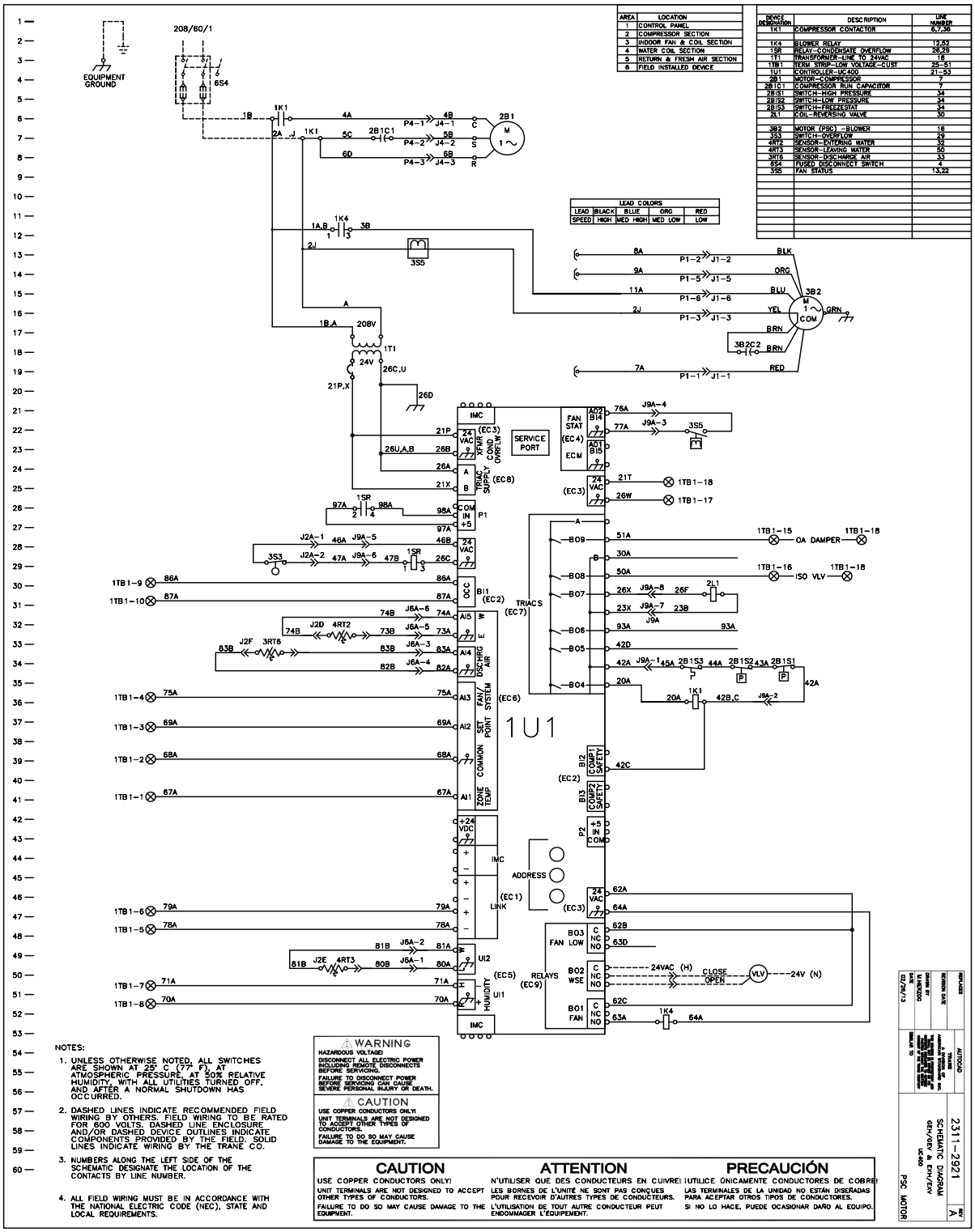
(a) Wiring diagrams provided in the catalog are generic. A unit specific *As Built* wiring diagram is located on the unit control panel.

Figure 28. Tracer ZN524 460V-60 Hz - 3 ph[(a)]



(a) Wiring diagrams provided in the catalog are generic. A unit specific *As Built* wiring diagram is located on the unit control panel.

Figure 29. UC400(a)



(a) Wiring diagrams provided in the catalog are generic. A unit specific *As Built* wiring diagram is located on the unit control panel.

Mechanical Specifications

General

Equipment shall be completely assembled, piped, internally wired, fully charged with R-410A refrigerant and test operated at the factory. Filters, thermostat field interface terminal strip, and all safety controls are furnished and factory installed.

The system water inlet and outlet connections shall be female NPT composed of copper.

The 5-ton and below equipment shall contain ETL, CETL and ISO-ARI 13256-1 listings and labels prior to leaving the factory. Units meet the efficiency standards of the ASHRAE 90.1-2010 standard. Service and caution area labels shall also be placed on the unit in their appropriate locations.

Air-to-Refrigerant Coil

Internally finned, 3/8-inch copper tubes mechanically bonded to a configured aluminum plate fin shall be standard. Coils shall be leak tested at the factory to ensure the pressure integrity. The coil shall be leak tested to 450 psig and pressure tested to 650 psig. The tubes are to be completely evacuated of air and correctly charged with proper volume of refrigerant prior to shipment.

The refrigerant coil distributor assembly shall be of orifice style with round copper distributor tubes. The tubes shall be sized consistently with the capacity of the coil. Suction header shall be fabricated from rounded copper pipe.

A thermostatic expansion valve shall be factory selected and installed for a wide range of control.

Basic Controls (option)

The basic control package shall contain a low and high pressure switch, overflow switch and freeze protection along with a compressor lockout relay for control assistance. High voltage power connections shall be made at the equipment's contactor. Each device shall be factory mounted, wired, and tested in the equipment and include freezestat, 50 VA transformer and compressor contactor.

Cabinet

Unit casing shall be constructed of zinc coated, heavy gauge, galvanized steel.

Service to the refrigerant and controls shall be provided through a single access panel at the front of the equipment. Access to the refrigerant and controls for the larger units shall be provided through the front and side access panels.

All panels shall be insulated with ½-inch thick dual density bonded glass fiber. The exposed side is a high density erosion proof material suitable for use in air streams up to 3600 feet per minute (FPM). The insulation meets the erosion requirements of UL 181. It has a flame spread of less than 25 and a smoke developed classification of less than 50 per ASTM E-84 and UL 723.

Access for inspection and cleaning of the unit drain pan, coils and fan section shall be provided. The unit shall be installed for proper access.

Hanging Rod Grommets

Four rubber grommets are enclosed with every GEH* unit. These grommets are to be used in conjunction with unit hanging rods to isolate vibration.

Compressors

The unit shall contain a high efficiency rotary or scroll compressor. External vibration isolation shall be provided by rubber mounting devices located underneath the mounting base of the compressor. A second isolation of the refrigeration assembly shall be supported under the compressor mounting base.

Internal thermal overload protection shall be provided. Protection against excessive discharge pressure shall be provided by means of a high pressure switch. A loss of charge shall be provided by a low pressure safety.

Deluxe Controls (option)

The deluxe control package shall provide a 50 VA transformer (fused) or 75 VA transformer with circuit breaker, low and high pressure switch, condensate overflow and freeze protection. The controller shall include a lockout function, anti-short cycle compressor protection, random start delay, brown-out protection, low pressure time delay, compressor delay on start and an open relay. Hot gas reheat and electric heat shall also be provided. Three LEDs (light emitting diodes) shall also be included for diagnostics of the equipment.

Drain Pan

The condensate pan shall be constructed of corrosion resistant material and insulated to prevent sweating. The bottom of the drain pan shall be sloped on two planes which pitches the condensate to the drain connection. The drain pan shall be flame rated per UL945V-B. A UL508 float switch shall be installed on all units to protect against the overflow of condensate from the drainpan.

Economizing Coil (GEH option)

The waterside economizing package shall be an external unit accessory pre-piped and pre-wired ready for turn-key installation to the unit. The economizing coil shall be designed to perform with the WSHP at unit measured flow rate of 80.6°F DB/66.2°F WB with 45°F EWT.

All hydronic coils shall be of 5/8 in. copper and aluminum plate fin combination. All coils shall be proof and leak tested from the manufacturer. The proof test shall be performed at 1.5 times the maximum operating pressure and the leak test at the maximum operating pressure.

A dual sloped noncorrosive drain pan shall be easily accessible and cleanable for the hydronic economizing coil.

An electronic two-position, 3-way valve shall meter water flow to the economizing coil during the economizing mode. It shall be factory set to energize the economizing mode at 55°F, while simultaneously halting mechanical operation of the compressor.

Hanging brackets with rubber isolation shall be provided for the horizontal version of the economizing coil option. The bracket design shall be the same throughout the equipment.

Electrical

The unit control box shall contain all necessary devices to allow heating and cooling operation to occur from a remote wall thermostat. These devices shall be as follows:

- 24 Vac energy limiting class II [50 VA (minimum) transformer]
- 24 Vac blower motor relay
- 24 Vac compressor contactor for compressor control
- Field thermostat connections shall be provided for ease of hook-up to a terminal strip located in the unit's control box.
- Lockout function controls cycling of the compressor shall be provided to protect the compressor during adverse operating conditions. The device may be reset by interrupting power to the 24 Vac control circuit. Reset may be done either at a remote thermostat or through a momentary main power interruption
- A high pressure switch shall protect the compressor against operation at refrigerant system pressures exceeding 650 psig.
- Factory installed wire harness shall be available for the Basic, Deluxe, ZN524 and UC400 control packages.

Nameplate information shall be provided for the application of either time-delay fuses or HACR circuit breakers for branch circuit protection from the primary source of power.

Electric Heat (option)

Internal boilerless control electric heat shall be factory wired and tested. It shall be composed of a nichrome open wire coil designed for 2-kW per unit ton. The design consist of a single stage of electric heat used as a primary heating source when compressor lockout has occurred due to the entering water temperature falling below 55°F with an adjustable range between 25°F to 60°F. The electric heat option is not intended for secondary heat. All power connections to the electric heat shall be made in the equipment's control box.

External boilerless electric heat control option is composed of a control interface for a field provided electric heat. The heater is placed external to the unit by the installer. Power connection to the electric heat is separate from the unit.

Filters

Units come standard with a flat filter rack for non-ducted return air applications. One-inch throwaway filters are standard. Two-inch throwaway, two-inch MERV 8 or 13 filters are available as an option. An optional ducted filter box is available as a field installed accessory.

Hot Gas Reheat (option)

Dehumidification shall be provided through a hot gas reheat option. The coil shall consist of 3/8" copper tubes mechanically expanded into evenly spaced aluminum fins. All coils shall be proof and leak tested. The proof test must be performed at 1.5 time the maximum operating pressure and the leak test performed at the maximum operating pressure.

Indoor Fan

The blower shall be a forward-curved style wheel with multiple speed combinations available.

All direct drive motors shall have sealed bearings that do not require field lubrication.

The motor has a permanent split capacitor with thermal overload protection. Options of standard static or high static can be selected. The motor contains a quick disconnect plug. They are constructed of corrosion resistant galvanized material. Removal of the motor and fan wheel can be made with the assistance of a factory provided orifice ring device. This device attaches the wheel and motor to the fan housing in a single assembly eliminating the need for access to the set screw on the backside of the fan hub.

The fan shall be placed in a draw-through configuration. They shall be constructed of corrosion resistant galvanized material.

Orifice Ring

Removal of the motor and fan wheel for the ½-5-ton units shall be made with the assistance of a factory provided orifice ring device. This device shall attach the wheel and motor to the fan housing in one assembly providing single side service access.

Pump Module (field installed accessory)

The pump module shall consist of either a single or dual 1/6 HP bronze pump and a brass 3-way shut-off valve. Cast iron pumps are also acceptable. The pump module kits shall contain the necessary components for the installation, operation and maintenance of the water circuit of a closed-loop distributed pumping application.

Refrigerant Circuits

The refrigerant circuit shall contained a thermal expansion device. Service pressure ports shall be factory supplied on the high and low pressure sides for easy refrigerant pressure or temperature testing.

Refrigerant Tubing

The refrigerant tubing shall be of 99% pure copper. This system shall be free from contaminants and conditions such as drilling fragments, dirt and oil. All refrigerant and water lines shall be

insulated with an elastomeric insulation that has a 3/8-inch thick wall in the air-side section of the unit.

Sound Attenuation

Sound attenuation shall be applied as a standard feature in the product design. The sound reduction package shall include vibration isolation to the compressor and water-to-refrigerant coil, unit base stiffeners, insulated metal compressor enclosure, and a second stage of vibration isolation to the compressor and water-to-refrigerant base pan.

DDC Controller (option)

The UC400 and ZN524 controller shall utilize factory furnished and mounted DDC controls. The DDC control package shall include a 75 VA transformer, high and low pressure switch, condensate overflow and freeze protection. The controller shall provide random start delay, heating/cooling status, occupied/unoccupied mode, fan status and filter maintenance options.

The controller shall be capable of a standalone application, or as applied to a full building automation installation.

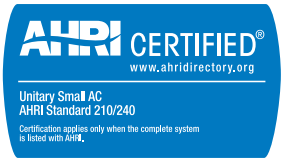
With this controller, the unit shall be capable of a hot gas reheat (for dehumidification), boilerless control for electric heat, waterside economizing, and support of variable speed pump control applications.

Water-to-Refrigerant Heat Exchanger

The water-to-refrigerant heat exchanger shall be of a high quality co-axial coil for maximum heat transfer. The copper or optional cupro-nickel coil shall be deeply fluted to enhance heat transfer and minimize fouling and scaling. The coil shall have a working pressure of 400 psig. The factory shall provide rubber isolation to the heat exchanging device to enhance sound attenuation.

Water-to-Refrigerant Heat Exchanger and Suction Lines - Insulated Option

The water-to-refrigerant heat exchanger(s), water lines, and refrigerant suction lines shall be insulated to prevent condensation at low temperatures below 60F degrees. This is not a standard option. This can be added to the existing water-to refrigerant heat exchanger spec when the insulated option is selected. This would be both for the stand and CuNi.



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